palgrave
macmillan

The Psychology of Money and Public Finance

Günter Schmölders

The Psychology of Money and Public Finance

This page intentionally left blank

The Psychology of Money and Public Finance

Günter Schmölders

Selected and introduced by

Björn Frank and Erich Kirchler

Translations by

Iain Grant and Karen Green

palgrave
macmillan

Softcover reprint of the hardcover 1st edition 2006 978-1-4039-4169-5

First published 2006 by
PALGRAVE MACMILLAN
Houndmills, Basingstoke, Hampshire RG21 6XS and
175 Fifth Avenue, New York, N.Y. 10010
Companies and representatives throughout the world

PALGRAVE MACMILLAN is the global academic imprint of the Palgrave Macmillan division of St. Martin's Press, LLC and of Palgrave Macmillan Ltd. Macmillan® is a registered trademark in the United States, United Kingdom and other countries. Palgrave is a registered trademark in the European Union and other countries.

ISBN 978-1-349-52096-1   ISBN 978-0-230-62511-2 (eBook)

DOI 10.1057/9780230625112

This book is printed on paper suitable for recycling and made from fully managed and sustained forest sources.

A catalogue record for this book is available from the British Library.

Library of Congress Cataloging-in-Publication Data
Schmölders, Günter, 1903–91
[Selections. English. 2006]
The psychology of money and public finance/by Günter Schmölders; selected and introduced by Björn Frank and Erich Kirchler; translations by Iain Grant and Karen Green.
p. cm.
Includes bibliographical references and index.
ISBN 1–4039–4169–6 (cloth)
1. Economics—Psychological aspects. I. Frank, Björn, II. Kirchler, Erich. III. Title.
HB74.P8S3713 2006
332.401′9—dc22   2006041756

10 9 8 7 6 5 4 3 2 1
15 14 13 12 11 10 09 08 07 06

Contents

List of Tables vii

List of Figures ix

1 Günter Schmölders and Economic Psychology: an Introduction **1**
Björn Frank and Erich Kirchler

1.1 Methodology: the long way towards empirical research 2
1.2 Plan of the book 4
1.3 Schmölders and public finance today 6
Acknowledgements 13
References 13

2 Economic Psychology **17**
Editors' remarks 17
2.1 Man as a social being 17
2.2 A contrasting programme to rational theory 26
2.2.1 Introduction 26
2.2.2 From historicism to prediction 32
2.2.3 Borrowed from psychology? 35
2.3 Socio-economic behaviour research 39

3 The Private Household **49**
3.1 How money is managed in private households 49
3.1.1 The head of the house and the housewife 49
3.1.2 Joint preferences 56
3.1.3 Income as a characteristic and a determining cause of behaviour in households 62
3.1.4 Thrift 69
3.1.5 Rationality and the household budget 77
3.1.6 The goals of household budget management 85
3.2 A behavioural approach to monetary theory 89
3.2.1 Introduction 89
3.2.2 The theory of money 90

3.2.3 Monetary theory and empirical research 93
3.2.4 Consequences for monetary theory and policy 116
3.3 Level of aspiration and consumption standard: some general findings (*with Bernd Bievert*) 124

4 The Entrepreneur **136**
4.1 Entrepreneurial behaviour 136
4.2 The entrepreneur in the economy and in the society of the Federal Republic of Germany 149

5 Psychology of Taxation and Public Finance **157**
5.1 Fiscal psychology: a new branch of public finance 157
5.2 Tax morale and tax resistance 164
5.3 Tax justice 178
5.4 The German tax mentality 186
5.5 Tax mentality in international comparison – an overview 192
5.6 A theory of incentive taxation in the process of economic development 198

6 Psychology and Macroeconomics **211**
6.1 The problem of economic prognosis 211
6.2 The liquidity theory of money 219

Notes 229

Index 246

List of Tables

[*Note*: Schmölders did not provide all tables with titles; titles in brackets were added by the editors in this list.]

3.1	Money management by professional and income groups	52
3.2	Financial assets and financial management	53
3.3	Influence of income and age on expectations of income	68
3.4	Influence of positive income experiences on income expectations	68
3.5	Income expectation and levels of debt	70
3.6	Households which give the impression of being less well-kept use less planning in managing the budget	82
3.7	High use of calculation reduces subjective liquidity	84
3.8	Wishes more frequently discussed in households which use calculation	86
3.9	Marital status of respondents	101
3.10	[Reasons for saving, by account type]	104
3.11	[Reasons for saving, by account type, in more detail]	104
3.12	[Usual mode of payment, by account type]	105
3.13	People's information about changes in interest rates by income	118
3.14	Consumption standard and income (in DM)	125
3.15	Consumption standard (in DM) and occupational groups	126
3.16	Consumption standard, occupational groups and income	127
3.17	Consumption standard (in DM) and education	128
3.18	Consumption standard (in DM) and life cycle	130
3.19	Consumption standard (in DM) and age	130
3.20	Consumption standard (in DM) and size of household	130
3.21	Consumption standard and expectations regarding the general economic trend	133
5.1	[Germans' attitude to tax, by gender and age group]	187
5.2	[Germans' attitude to tax, by education, profession and social stratum]	188
5.3	[Associations with the word 'tax', by profession]	190
5.4	Replies to the question 'Do you think that people get a full service in return for their taxes?'	191
5.5	[Perceived fairness of taxation, by profession]	191

5.6 [Perceived fairness of taxation and meaning of 'tax' for respondent] 191
5.7 Perceived variations of tax liability in relation to income decreases 201
5.8 Perceived variations of tax liability in relation to income increases 202
5.9 The breakdown of added value in manufacturing industry 209
5.10 Breakdown of an increase in the added value by factors 209

List of Figures

1.1 Tax morale and the size of the shadow economy 12
3.1 Factors influencing saving behaviour ('tree analysis') 112

1
Günter Schmölders and Economic Psychology: an Introduction

Björn Frank and Erich Kirchler

Günter Schmölders (1903–91) is one of the major figures in German post-war economics. Despite his fruitful influence on economics, behavioural economics and economic psychology in German-speaking countries, his scientific œuvre is largely unknown outside Austria, Germany and Switzerland. Most of his publications are available only in German, unavailable for many colleagues working in the fields of economics and psychology. This volume aims to overcome that barrier by presenting a selection of representative publications in English, enabling a wider international audience to have access, for the first time, to Günter Schmölders' pioneering and seminal work.

In general, there are three main possible triggers for the rediscovery or renaissance of a social scientist, and all of these apply to Günter Schmölders:

- Firstly, he pioneered research in a field which only later began to flourish and to be recognized as important.
- Secondly, he was previously masked behind a language barrier which has now been overcome.
- Thirdly, the time has come to look back and sort the lasting contributions from those of only temporary importance or interest.

Concerning the first point, it was only about ten years after Günter Schmölders retired in 1972 that the International Association for Research in Economic Psychology (IAREP) and the *Journal of Economic Psychology* were founded. Today, modern economists are not only aware of the richness of motives that drive human behaviour, they also incorporate theories on human motivation into their models, and they measure their theories against data often collected or generated with great effort. This was not the case in Schmölders' time. Schmölders' generation was preoccupied with exploiting the plain *homo economicus* model, which even so gave us many new insights. We will return to the issue of methodology shortly.

While Schmölders increasingly gained recognition in the 1960s and 1970s in Germany, his work did not really transcend the language barrier, which seemed a matter of regret to him (Schmölders, 1988, p. 169). However, could anything else have been expected of him, in terms of his publication strategy? Schmölders belonged to a generation of researchers who had few incentives for publishing in a foreign language (even the Nobel prize-winning work by Reinhard Selten (1965) was first published in German), and English was in fact the fifth foreign language Schmölders had learned as a doctoral student (Frank, 2003). He published only one book and 17 articles, including some minor ones, in English. His total output, on the other hand, can be quantified only in so far as it exceeds the 457 items listed in the incomplete and inaccurate bibliography in Schmölders (1973).

This leads on to the third reason why Schmölders is currently still underrated: the sheer volume of his publications is impressive, but which of his works should the newcomer to Schmölders begin with today, given that economic psychology and behavioural economics are now well-accepted fields of research? In fact, they are so well recognized by the Nobel Committee that in 2003 it lauded Daniel Kahneman's pioneering work and innovative research, conducted together with Amos Tversky. This book is intended to provide the answer. It collects together his writings on topics relating to economic psychology which were originally published in English but are no longer conveniently accessible. These are complemented with selected sections translated from Schmölders' books, together resulting in a true Schmölders monograph.

1.1 Methodology: the long way towards empirical research

Schmölders' academic teachers were proponents of the final phase of the historical school. The futility of much of their efforts offered Schmölders a salutary example; he often emphasized that mere data collection, without a guiding idea from the outset, is often destined to be fruitless. But as Schmölders took the view that the *homo economicus* model was not qualified to generate useful hypotheses, what was his approach to be? His early work can be seen as exemplifying the *Verstehen* approach, or 'reconstructive imagination' (see Frank, 2003). For example, he analysed the origins of alcohol prohibition by trying to see alcohol and temperance through the eyes of nineteenth-century Americans, and conceiving what it must have been like to be a politician shortly before prohibition. His next research topic was not too far removed from this: the taxation of alcoholic beverages in Germany and other countries. A spin-off from this research was a small booklet on tax morale and tax burdens (Schmölders, 1932) which he later considered as the starting point for his research into economic psychology or, more specifically, 'human behaviour under taxation' (according to Schmölders, 1959, reprinted here as section 5.1).

It was a small beginning; however, the main point he makes is that the 'tax morale' depends on tax rates, but also on other determinants which relate to the loyalty of citizens and how much they trust state authorities. He might already have planned to explore this line further through empirical investigations, but the years after 1932 were not accommodating to anyone looking at the relationship between citizens and the state in this way.

And indeed, Schmölders quickly turned to other topics, receiving his first professorship in Breslau in 1934 and giving the impression of being both inconspicuous and having adapted to the difficult circumstances of that time. However, after accepting a call to the University of Cologne in 1940 he became a member of the Kreisau Circle around Helmut James Graf von Moltke and Peter Graf Yorck von Wartenburg, a resistance group which helped those being persecuted, supported a military coup d'état and – above all – planned a new, humanistic order for the time thereafter. Schmölders served as an economic adviser, and sought to advocate competition and reliance on the market mechanism against the more or less socialist ideas of some other members. He was a prospective finance secretary of state, but military service kept him from becoming more deeply involved in the activities of the Kreisau Circle, and from the fate of about half of its inner circle, who were executed in 1944 and 1945.

After the Second World War, Schmölders' intellectual freshness and productivity were those of a man at the beginning of his career, not that of an established researcher over 40. According to Guy Kirsch, Schmölders never thought much of methodological discussions, and being ahead of his time he needed to build bridges, as Kirsch put it, to enable his fellow economists to see that his questions and his answers mattered (Kirsch, 1993, pp. 13–14). He did make efforts in that direction. This book starts with a few of his attempts to promote his approach.

1.2 Plan of the book

These attempts are subsumed under the title 'Economic Psychology' (Chapter 2). The main point made in section 2.1 ('Man as a social being') is that economic behaviour can be analysed and understood only against the background of society as a whole. Section 2.2 is more concrete. Schmölders discusses the role that disciplines such as psychology can play when it comes to developing theories on which economic prognoses can be built, which Schmölders sees as the ultimate touchstone for theories. It is remarkable that as early as 1956, Hedwig Reinhardt tried to alert *American Economic Review* readers to the more unconventional parts of Schmölders' German book *Finanzpolitik* (1955, 3rd edn, 1970a): 'It may seem strange to encounter *Freud* in government finance, but it certainly opens some challenging prospects' (Reinhardt, 1956, p. 1007). To typical readers at that time, however, this must have seemed quite odd, all the more so as Schmölders even brings ethnology into play. We imagine that he would have been excited by recent research conducted by experimental economists, running the same experiments in very different cultures (e.g. Henrich et al., 2001; Ockenfels and Weimann, 1999; Roth et al., 1991). Section 2.3 is less conceptual; Schmölders gives a brief overview of the precise focus of the work of his empirical research institute during its early years.

Chapter 3 deals with the private household. In section 3.1, the black box of the decision-making unit that is the 'household' is opened, and the individual actors within the household are looked at. Current research is returning to precisely this topic (e.g. Kirchler et al., 2001). The title of section 3.2, 'A behavioural approach to monetary theory', is a bit misleading, as the larger part of this investigation is microeconomic in nature (however, it concludes with reflections on the consequences for monetary theory and policy). It includes original survey evidence on attitudes towards saving and borrowing. Though it is partly outdated because monetary institutions have changed in the meantime, it contains real treasures worthy of replication today, e.g. 40 per cent of the respondents expect the value of the currency to fall, while 70 per cent expect prices to rise.

Section 3.3 presents empirical evidence on levels of aspiration. By and large, survey respondents do not seem to desire anything which is out of their reach (determined by income). These results are mainly static. The dynamic view, only noted in passing by Schmölders and the co-author of this chapter, Bernd Bievert, would be that saturation does not last for long; comparison with others urges people to acquire new (durable) goods (Frank, 1997, 1999; Layard, 2005).

At the end of his academic career, Schmölders turned to investigating entrepreneurship (Chapter 4). At that time, he had a number of contacts with entrepreneurs or consultancy services, and held posts on the boards of individual firms and associations. Another stimulus for him might have been the changing public climate at the end of the 1960s, which turned against entrepreneurs. In section 4.1, Schmölders discusses the variety of motives which drive entrepreneurs, such as prestige, and the sociocultural determinants of entrepreneurship. Modern research clearly confirms Schmölders' view. According to Köllinger et al. (2005), starting a new business does not pay on average, and those who nevertheless become entrepreneurs share certain subjective perceptions of their opportunities. Adam Smith's classical view was that society benefits from entrepreneurs who coolly and rationally maximize profits, while the modern view is that society benefits from entrepreneurs' overconfidence. In section 4.2 Schmölders further elaborates on the role of the entrepreneur in capitalist societies, while also trying to explain the negative image of the entrepreneur at the time of writing.

In comparison to Schmölders' work on public finance (Chapter 5), to which we devote a separate section of these introductory remarks, his contributions to macroeconomics (in a narrow sense) are relatively sparse. His primer on the problems of economic prognosis (section 6.1) is a natural extension of his methodological remarks in Chapter 2. He argues convincingly that the 'mechanical and mathematical methods of prognosis' are suited only for the prognosis of persistent trends, but not for business cycles under the impact of expectations and psychological factors. This point is further elaborated in section 6.2 of this book on 'The quantity theory of money'. This paper had been prominently published, but the terminology proposed in the title did not prevail. Nevertheless, the main points made by Schmölders are undisputed nowadays: neither quantity theory nor its successor, the 'income theory of money', can explain, under modern money and credit conditions, the *causal* relations between money and the volume of business activity, let alone its relation to the general price level. The concept of 'volume' of money and credit is more a consequence than a cause of a given volume of business activity. Schmölders proposes to start from a wider concept of liquidity than the mere cash liquidity of banks. The overall liquidity position, which is related to the buying and investment decisions of businesspeople in general, includes not only cash and stocks in trade, but also potential credit lines from banks and other sources of 'money'. Given that this potential credit depends on profit expectations, however, businesspeople and banks are influenced in their borrowing and lending decisions by psychological factors such as confidence, moods and other imponderables, as well as by their actual cash reserves; hence liquidity in this broader sense seems to become the 'missing link' between monetary theory and business activity.

1.3 Schmölders and public finance today

Research on tax behaviour, which Schmölders had started, began to flourish in the 1970s with a focus on attitudes and social norms (e.g. Vogel, 1974), and also including knowledge as a determinant of compliance (e.g. Eriksen and Fallan, 1996; Wärneryd and Walerud, 1982). This research area then progressed further, on to analyses of perceptions of justice and tax ethics (e.g. Song and Yarbrough, 1978; Spicer and Lundstedt, 1976), analyses of anomalies in compliance decisions (e.g. Schepanski and Shearer, 1995), and to the study of the cooperative interaction between tax authorities and taxpayers (e.g. Braithwaite, 2003b).[1] The accumulated bulk of knowledge is impressive, and most of the empirical studies on behavioural aspects are rooted in Günter Schmölders' stimulating ideas.

One of the major problems in tax administration is the matter of what taxes the administration has to administer, along with the tax laws and how to interpret them, the complexity, ambiguity and incomprehensibility of the law. Half a century ago, Schmölders (1959; section 5.1 of this volume) was already testing politicians in the German parliament and members of its finance committee as to their economic knowledge, and found a poor understanding of fiscal policy. Tax authorities face the problem of the complexity of public finance and the complexity of the law, as well as ambiguities in interpreting and executing it. He also gives a number of reasons, by now well known, as to why countercyclical fiscal policy is hard for politicians to achieve, based on the impression he received of their way of thinking.

Of the papers originally written in English and collected in this volume, this one is the oldest. Schmölders had written four papers in English previous to it, but these notes had nothing to do with the psychology of money and public finance. Hence this is the first paper in which Schmölders presents his main research to readers of English, and he starts very directly, the first sentence being: 'Two important results of some 1958 surveys conducted under the auspices of the Cologne Center of Empirical Economics Research in the new line of research on fiscal psychology are: . . . ' Schmölders briefly sets out the method employed in his research on tax compliance; apart from the research on politicians already mentioned, he also describes some intelligent questions asked in order to get some reliable answers on the issue from private households.

The remainder of Chapter 5 is devoted to extensions on the topic for which Schmölders is best remembered. The most important contribution to the understanding of tax behaviour is perhaps Günter Schmölders' concept of tax morale and his research on social representations of taxes, which he defines as the starting point of investigations of tax behaviour:

> How is the state mirrored in citizens' minds? This is the question with which any investigation about citizens' tax discipline, their aspirations for the state and their integration in civic affairs must start; consciousness about the state leads to citizens' civic and tax 'sentiments' and to the fundamental attitude which they hold with regard to the problems of 'their' state. (Schmölders, 1960, p. 38)

Although in everyday life taxes might not be a hotly disputed issue, people try to make sense of their contributions to the community at least when taxes are due or whenever government spending is contested or new taxes are introduced. Moreover, people discussing taxation issues evaluate fiscal policy, tax rates and the use of taxes for the provision of public goods, as well as the interaction between themselves as taxpayers and tax authorities. In the end, motivation to comply or not to comply develops the respective behaviour. Cullis and Lewis (1997) highlight the importance of subjective sense-making and the social construction of the taxation phenomena in providing guidelines for behaviour, and thus pay tribute to Günter Schmölders' innovative approach:

> Talk about social constructionism is everywhere in the wind like pollen and rather than merely being fashionable the ideas are highly relevant to tax compliance. Economists tend to see (construct) tax evasion as a technical problem; social scientists (including psychologists) as a social problem. Following the social constructivist line the whole notion of tax compliance can be viewed as socially constructed by the principal actors. Tax 'enforcement' officers have beliefs about tax evaders, who they are, what they are like. Taxpayers (including evaders) likewise have notions about tax officers, their beliefs and how they will behave. None of these beliefs need to be 'true' in any 'objective' sense but if the players in the game believe them to be (and act as if they do) then the reality is constructed. It follows from this that any analysis must examine these constructions and that the

> rhetoric of 'rational economic man' is far from an abstract idea and can become instead the guide and map for dealing with everyday life and social problems. If we believe taxpayers are selfish utility maximisers, taxpayers will behave like selfish utility maximisers. If we believe taxpayers have a moral nature, a sense of obligation or civic duty, taxpayers will reveal this side of their nature. (p. 310)

When people discuss issues which are socially relevant (e.g. topics relating to religion and science, environmental protection, economic issues or taxes in particular), they are usually not experts in the field but instead exchange lay knowledge, trying to understand and evaluate the issue at stake. Serge Moscovici (1961, 2001) calls the concepts which are constructed in social interaction 'social representations' and developed a theory which describes and explains processes which lead from unfamiliar phenomena to familiar concepts. His 'théorie des représentations sociales' is based on Durkheim's work (1898 / edition 1976) on 'représentations collectives', and offers explanations for a series of social phenomena, such as attitudes, values and norms, stereotypes and attributions, myths and ideologies. Although individuals are the holders of social representations, it is important to highlight that social representations emphasize the shared social construction process rather than individual cognitive processes.

The concept of social representations serves as a framework to integrate a variety of variables which have been discussed in the literature as determinants of tax compliance. On a societal level, these determinants are ethics and values, social norms and tax morale (defined as intrinsic motivation to comply), as well as the sense of civic duty, as defined by Frey (1997). Cultural aspects are also discussed, mainly in studies comparing tax non-compliance across countries, which ascribe differences to cultural difference (e.g. Alm and Torgler, in press). On the individual level, subjective knowledge and perceptions of taxes and tax non-compliance are part of social representations, as well as attitudes and behaviour intentions. Attitudes, binding norms and control over one's own behaviour in terms of opportunities to comply or not to comply can be discussed in the framework of the theory of reasoned action and the theory of planned behaviour, as in work by Fishbein and Ajzen (1975) and Ajzen (1991). Attitudes were measured towards the government, trust in the government, government spending, and more specifically attitudes towards non-compliance, overstating expenditures and non-filing of income. An important variable determining compliance lies in perceptions of fairness. Finally, motivational postures

(Braithwaite, 2003a) are integrated in this section, as these are closely linked to behaviour intentions. Overall, the concept of social representations is closely related to what Schmölders defined as tax morale, integrating knowledge about taxes, socially shared concepts, evaluations, norms and opportunities to comply or not to comply, considerations of fairness, and the motivation to pay one's taxes (see Schmölders, 1960, and section 5.2 of this volume).

What do taxpayers associate with taxes? Schmölders asked German citizens: 'What comes to mind when you hear the word "taxes"?' (section 5.4). The use of free association to study tax mentality was an early approach to studying social representations, and the assumption that associations which come spontaneously to mind would display the nucleus of a person's representations is perfectly in accordance with the actual theory of social representations (Abric, 1984). Table 5.3 in section 5.4 displays aggregated results for the total sample, and separate results for blue-collar workers, white-collar workers, civil servants, the self-employed, farmers and retired people. While about 10 per cent of respondents had no associations at all when they thought about 'taxes', one-third of associations were on technical concepts, such as tax laws, tax offices, dates of taxes due, etc. Negative associations were observed in 29 per cent of cases, mainly negative feelings and claims regarding the number of taxes and the high tax burden. Interestingly, the most negative associations were observed in the group of the self-employed (41 per cent), while civil servants complained the least (23 per cent). Further analyses revealed that 83 per cent of the self-employed thought the actual tax rate was too high, while approximately 70 per cent of blue-collar workers, white-collar workers and farmers did. Only 63 per cent of civil servants thought that. Almost none thought taxes should be higher (0–2 per cent), while approximately 30 per cent found the actual tax rate acceptable, except among the self-employed.

Differential representations of taxes, similar to those found by Günter Schmölders, have also been found in more recent studies in Austria (Kirchler, 1998) and Italy (Berti and Kirchler, 2001).

In his early survey, Schmölders (1960) asked respondents to indicate to what degree they are in favour of 'the state'. At the time, 56 per cent expressed positive feelings, as compared to 13 per cent with clearly negative feelings towards the state, with 31 per cent neutral or undecided. The main advantages perceived to be offered by the state were shelter and security (28 per cent), work and pensions (17 per cent), laws and rights (6 per cent), freedom (4 per cent), and education and other benefits (6 per cent). Respondents with higher educational qualifications evaluated the state more positively, compared to respondents leaving school at the statutory leaving age, and civil servants and white-collar workers were clearly more in favour of the state than blue-collar workers. With regard to taxation, respondents were quite sceptical, preferring taxes to be cut even if their income was in the lowest bracket and their respective tax burden low. Taxes were often perceived as a loss of income. Schmölders (1960) differentiated between views of taxes as a contribution to the common good or as money which is taken away by the state (see section 5.4 below). While two-thirds agreed that they had to give or contribute something, one-third clearly perceived taxes as an imposition. While almost equal percentages of men (30 per cent) and women (33 per cent) perceived taxes as a loss, in the younger samples negative connotations were more frequent than in the older samples. The percentages for the groups aged 30 and below, those aged 31–50, those aged 51–65, and 65 and above were 36, 33, 29, and 23 per cent respectively. Low education and lower work status were also co-varying with negative connotations (Table 5.2 in section 5.4).

The degree of negative perceptions associated with tax indicated by these results may cause surprise. In fact, despite taxpayers' willingness to comply, tax evasion is not perceived as a serious crime; rather, it is perceived as something engaged in by clever people. In the German surveys conducted by Schmölders (1960, 1964), approximately half of the respondents likened a person deliberately evading taxes to a cunning businessman, while only one-quarter judged such a person as a thief or deceiver (see also Chapter 2 below). Similar results are reported by Song and Yarbrough (1978) and Vogel (1974), who found that drink driving or stealing a car are judged more severely than tax evasion; tax evasion is perceived as somewhat worse than stealing a bicycle. The struggle by individuals and businesses to improve their financial situation is widely accepted in society, and perceived as a prerequisite of wealth. As Lamnek et al. (2000) emphasize, work and achievement are fundamental values in societies with Christian traditions, and wealth is perceived as a consequence of hard work. Some types of 'working on the black' might be perceived as a virtue rather than a vice, especially if it is hard work, and keeping what one has earned may be judged a less criminal behaviour than wrongfully taking advantage of public assets which one is not supposed to have. In relation to paying a reduced amount of taxes and receiving benefits which are not due, an asymmetrical degree of condemnation is also evidenced by Orviska and Hudson (2002): while three-quarters of respondents found it wrong or seriously wrong to take benefits not due to them and only one-quarter admitted they would engage in claiming benefits in that way, it was only slightly more than half who found not declaring cash payments wrong and more than 40 per cent said they would not do it. As found in many studies on socio-demographic differences, older and female respondents disapproved of evasion most, while young and male respondents held the laxest attitudes.

Norms are conceived as standards of behaviour on three levels: the individual, the social referent group, and at national level. On the individual level, norms define internalized standards of how to behave; operating as shared standards in one's social context, norms also determine the behaviour of a social group, e.g. friends and acquaintances, or a vocational group; lastly, on the national level, norms become cultural standards, often mirrored in actual law. Research on tax compliance has focused on personal ethics and subjective perception of behavioural habits in reference groups of taxpayers. On the cultural level, norms have been addressed mainly under the terms 'tax morale' (Schmölders, 1960, and section 5.2 below) and 'civic duty' (Frey, 1997), and also under the term 'cultural norms'. Cultural norms and societal institutions are perceived as important in determining tax compliance. As Schmölders (1970b) emphasizes, tax compliance is a 'behavioural problem' and the success of taxes depends on cooperation. On the aggregate societal level, the concept of tax morale implies the (intrinsic) motivation to comply. Tax morale was coined by and defined as

> the attitude of a group or the whole population of taxpayers regarding the question of accomplishment or neglect of their tax duties; it is anchored in citizens' tax mentality and in their consciousness to be citizens, which is the base of their inner acceptance of tax duties and acknowledgment of the sovereignty of the state. (Schmölders, 1960, pp. 97–8)

According to Schmölders, tax morale is best visible in citizens' moral evaluation of tax evasion.

The concept of tax morale was studied by Strümpel (1966, 1969), and later by Lewis (1982), Torgler (2002), Vogel (1974), Frey (1997) and Frey and Eichenberger (2002) among others, and by Braithwaite and Ahmed (2005) in the context of higher education policy in Australia. Generally, higher morale was found to be positively related to tax compliance, and on the aggregate level high tax morale in a country was found to be negatively related to the shadow economy. Alm and Torgler (in press) refer to Schmölders' (1970b) work on tax morale (defined as the intrinsic motivation to pay one's taxes), seeing this as an important

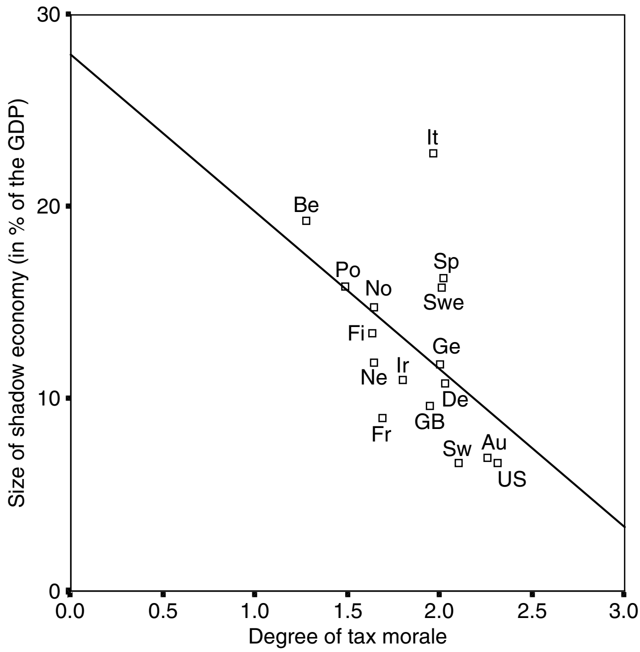

Figure 1.1 Tax morale and the size of the shadow economy (Alm and Torgler, 2006, p. 243)

Notes: Au: Austria, Be: Belgium, De: Denmark, Fi: Finland, Fr: France, Ge: Germany, GB: Great Britain, Ir: Ireland, It: Italy, Ne: Netherlands, No: Norway, Po: Portugal, Sp: Spain, Sw: Switzerland, Swe: Sweden, US: USA

determinant of economic activities and economic development. Using Schneider and Klinglmair's (2004) estimates of the shadow economy, they analysed the linear relationship between morale and size of shadow economy and found an impressive covariation, as shown in Figure 1.1. Indeed, these findings and Braithwaite's (2003a) work on motivational postures demonstrate the importance of subjective and socially shared representations of tax phenomena with regard to citizens' involvement in the shadow economy and in tax evasion and avoidance.

Braithwaite and Ahmed (2005) refer to tax morale as the 'internalized obligation to pay tax' (see also Frey and Feld, 2002). Similarly, Frey (1997) and Alm and Torgler (2006) define tax morale as the 'intrinsic motivation to pay one's taxes', which Orviska and Hudson (2002) link to the concept of civic duty. Civic duty proposes that people are motivated not just by a concern to maximize their own well-being, but by a sense of responsibility and loyalty to the society and nation. Responsible citizens with high levels of civic duty are collaborative even if the system allows non-compliance. Their behaviour is not regulated externally by audits and sanctions, but by their concern for the society. Their willingness to comply results from a strong sense of civic duty.

Recognition of the importance of tax morale goes hand in hand with the demand for a revision of the relationship between citizens, government and institutions, in order to establish trust in political leadership and the public administration, and hence cooperation (e.g. Fjeldstad, 2004; Frey and Eichenberger, 2002; Kirchgässner et al., 1999; Pommerehne and Frey, 1992; Torgler, 2005a, b; Tyler, 2001a, b). Rather than responding to non-compliance with intrusive audits and severe punishment, compliance will be fostered by supportive communications and interactions which inspire trust, as well as by appeals for cooperation. Stainer et al. (1997) call for 'tax planning [which] must be exercised in an atmosphere of integrity, mutual trust and, above all, a good ethical climate', and go on to quote the *Financial Times*, which observes, 'it is part of a civilized society that people, inside and outside business, act morally. No more and no less' (p. 218).

Schmölders is the trailblazer for empirical research on this topic. No less, and even a bit more, as this volume demonstrates.

Acknowledgements

We are indebted to Claudia Schmölders for her encouragement, and for the permission to reprint Schmölders' papers. Financial support from the Schmölders Foundation (Schmölders-Stiftung für Verhaltensforschung im Wirtschaftsleben) for the translations is gratefully acknowledged.

References

Abric, J.-C. (1984). A theoretical and experimental approach to the study of social representations in a situation of interaction. In S. Moscovici and R. Farr (eds), *Social Representations* (pp. 223–50). Cambridge, UK: Cambridge University Press.

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes*, 50, 179–211.

Alm, J. and B. Torgler (2006). Culture differences and tax morale in the United States and in Europe. *Journal of Economic Psychology*, 27, 224–46.

Berti, C. and E. Kirchler (2001). Contributi e contribuenti: Una ricerca sulle rappresentazioni del sistema fiscale. *Giornale Italiano di Psicologia*, 28, 595–607.

Braithwaite, V. (2003a). Dancing with tax authorities: motivational postures and non-compliant actions. In V. Braithwaite (ed.), *Taxing Democracy* (pp. 15–39). Aldershot, Hants, UK: Ashgate.

Braithwaite, V. (2003b). A new approach to tax compliance. In V. Braithwaite (ed.), *Taxing Democracy* (pp. 1–11). Aldershot, Hants, UK: Ashgate.

Braithwaite, V. and E. Ahmed (2005). A threat to tax morale: the case of Australian higher education policy. *Journal of Economic Psychology*, 26(4), 523–40.

Cullis, J. and A. Lewis (1997). Why people pay taxes: from a conventional economic model to a model of social convention. *Journal of Economic Psychology*, 18, 305–21.

Durkheim, E. (1898, 1976 edition). Individuelle und kollektive Vorstellungen. In E. Durkheim (ed.), *Soziologie und Philosophie* (pp. 45–83). Frankfurt am Main: Suhrkamp.

Eriksen, K. and L. Fallan (1996). Tax knowledge and attitudes towards taxation: a report on a quasi-experiment. *Journal of Economic Psychology*, 17, 387–402.

Fishbein, M. and I. Ajzen (1975). *Belief, Attitude, Intention and Behavior: an Introduction to Theory and Research*. Reading, Mass.: Addison-Wesley.

Fjeldstad, O.-H. (2004). What's trust got to do with it? Non-payment of service charges in local authorities in South Africa. *Journal of Modern African Studies*, 42, 539–62.

Frank, B. (2003). Günter Schmölders and the economics of prohibition. In W.J. Samuels (ed.), *Studies of Neglected Continental Thinkers of Germany and Italy. European Economists of the Early 20th Century*, Vol. 2 (pp. 281–94). Cheltenham: Elgar.

Frank, R.H. (1997). The frame of reference as a public good. *Economic Journal*, 107, 1832–47.

Frank, R.H. (1999). *Luxury Fever. Why Money Fails to Satisfy in an Era of Excess*. New York: The Free Press.

Frey, B.S. (1997). *Not Just for the Money: an Economic Theory of Personal Motivation*. Cheltenham, UK: Edward Elgar.

Frey, B.S. and R. Eichenberger (2002). Democratic governance for a globalized world. *Kyklos*, 55(2), 265–88.

Frey, B.S. and L.P. Feld (2002). Deterrence and morale in taxation: an empirical analysis. CESifo Working Paper Series, CESifo Working Paper No. 760. Munich: CESifo.

Henrich, J., R. Boyd, S. Bowles, C. Camerer, H. Gintis, R. McElreath and E. Fehr (2001). In search of Homo economicus: experiments in 15 small-scale societies. *American Economic Review*, 91(2), 73–9.

Kirchgässner, G., L.P Feld and M.R. Savioz (1999). *Die direkte Demokratie*. Munich: Vahlen.

Kirchler, E. (1998). Differential representations of taxes: analysis of free associations and judgments of five employment groups. *Journal of Socio-Economics*, 27(1), 117–31.

Kirchler, E., C. Rodler, E. Hölzl and K. Meier (2001). *Conflict and Decision-Making in Close Relationships. Love, Money and Daily Routines*. Hove, UK: Psychology Press.

Kirsch, G. (1993). *Gedenkrede auf Günter Schmölders (1903–1991)*. Kölner Universitätsreden 73, Cologne.

Köllinger, P.M. Minniti and C. Schade (2005) 'I think I can, I think I can': overconfidence and entrepreneurial behavior, DIW discussion paper 501 (http://www.diw.de/deutsch/produkte/publikationen/diskussionspapiere/docs/papers/dp501.pdf).

Lamnek, S., G. Olbrich and W. Schaefer (2000). *Tatort Sozialstaat: Schwarzarbeit, Leistungsmissbrauch, Steuerhinterziehung und ihre (Hinter)Gründe*. Opladen: Leske + Budrich.

Layard, R. (2005). *Happiness: Lessons from a New Science*. London: Penguin.

Lewis, A. (1982). *The Psychology of Taxation*. Oxford, England: Martin Robertson.

Moscovici, S. (1961). *La Psychanalyse, son Image et son Public*. Paris: Presse Universitaire de France.

Moscovici, S. (2001). The phenomenon of social representations. In S. Moscovici and G. Duveen (eds), *Social Representations – Explorations in Social Psychology* (pp. 18–77). New York: New York University Press.

Niemirowski, P., S. Baldwin and A. Wearing (2001). Thirty years of tax compliance research: of what use is it to the ATO? In M. Walpole and C. Evans (eds), *Tax Administration in the 21st Century* (pp. 199–214). St. Leonards: Prospect Media.

Ockenfels, A. and J. Weimann (1999). Types and patterns: an experimental East-West-German comparison of cooperation and solidarity. *Journal of Public Economics*, 71, 275–87.

Orviska, M. and J. Hudson (2002). Tax evasion, civic duty and the law abiding citizen. *European Journal of Political Economy*, 19, 83–102.

Pommerehne, W. and B.S. Frey (1992). The effects of tax administration on tax morale. Diskussionsbeiträge Sonderforschungsbereich 178 'Internationalisierung der Wirtschaft'. Universität Konstanz, Juristische Fakultät, Serie II, No. 191, September 1992.

Reinhardt, H. (1956). Review of *Finanzpolitik*. By Günter Schmölders. *American Economic Review*, 46, 1007–9.

Roth, A.E., V. Prasnikar, M. Okuno-Fujiwara and S. Zamir (1991). Bargaining and market behavior in Jerusalem, Ljubljana, Pittburgh and Tokyo: an experimental study. *American Economic Review*, 81, 1068–95.

Schepanski, A. and T. Shearer (1995). A prospect theory account of the income tax withholding phenomenon. *Organizational Behavior and Human Decision Processes*, 63(2) Aug., 174–86.

Schmölders, G. (1932). *Steuermoral und Steuerbelastung*. Berlin.

Schmölders, G. (1955). *Finanzpolitik*. Berlin: Springer.

Schmölders, G. (1959). Fiscal psychology: a new branch of public finance. *National Tax Journal*, 12, 340–5.

Schmölders, G. (1960). *Das Irrationale in der öffentlichen Finanzwirtschaft*. Frankfurt am Main: Suhrkamp.

Schmölders, G. (1964). *Finanzwissenschaft und Finanzpolitik*. Tübingen: Mohr (Paul Siebeck).

Schmölders, G. (1970a). *Finanzpolitik*, 3rd edn. Berlin, Heidelberg, New York: Springer.

Schmölders, G. (1970b). Survey research in public finance – a behavioural approach to fiscal theory. *Public Finance*, 25, 300–6.

Schmölders, G. (1973). *Sozialökonomische Verhaltensforschung*. Berlin: Duncker & Humblot.

Schmölders, G. (1988). *'Gut durchgekommen?' Lebenserinnerungen*. Berlin: Duncker & Humblot.

Schneider, F. and R. Klinglmair (2004). Shadow economics around the world: what do we know? Retrieved 25 April 2005, from http://papers.ssrn.com/sol3/papers.cfm?abstract_id=518526.

Selten, R. (1965). Spieltheoretische Behandlung eines Oligopolmodells mit Nachfrageträgheit. *Zeitschrift für die Gesamte Staatswissenschaft*, 121, 301–24, 667–89.

Song, Y.-D. and T.E. Yarbrough (1978). Tax ethics and taxpayer attitudes: a survey. *Public Administration Review*, 38, 442–52.

Spicer, M.W. and S.B. Lundstedt (1976). Understanding tax evasion. *Public Finance*, 21(2), 295–305.

Stainer, A., L. Stainer and A. Segal (1997). The ethics of tax planning. *Business Ethics. A European Review*, 6, 213–19.

Strümpel, B. (1966). Disguised tax burden compliance costs of German business men and professionals. *National Tax Journal*, 19(1), 70–7.

Strümpel, B. (1969). The contribution of survey research to public finance. In A.T. Peacock (ed.), *Quantitative Analysis in Public Finance* (pp. 13–22). New York: Praeger.

Torgler, B. (2002). Speaking to theorists and searching for facts: tax morale and tax compliance in experiments. *Journal of Economic Surveys*, 16(5), 657–83.

Torgler, B. (2005a). Tax morale and direct democracy. *European Journal of Political Economy*, 21, 525–31.

Torgler, B. (2005b). Tax morale in Latin America. *Public Choice*, 122(1–2), 133–57.

Tyler, T.R. (2001a). Public trust and confidence in legal authorities: what do majority and minority group members want from the law and legal institutions? *Behavioral Sciences and the Law*, 19, 215–35.

Tyler, T.R. (2001b). Trust and law abidingness: a proactive model of social regulation. *Boston University Law Review*, 81(2), 361–406.

Vogel, J. (1974). Taxation and public opinion in Sweden: an interpretation of recent survey data. *National Tax Journal*, 27, 499–513.

Wärneryd, K. and B. Walerud (1982). Taxes and economic behaviour: some interview data on tax evasion in Sweden. *Journal of Economic Psychology*, 2, 187–211.

2
Economic Psychology

Editors' remarks

This introductory chapter gives an impression of how Schmölders propagates his new research approach.

'Man as a social being' first appeared in Walter Leifer (ed.), *Man and Modern Time* (German Opinion on Problems of Today No. I/1962), Munich: Huber 1962, pp. 29–38. A German version appeared in *Merkur*, No. 5, May 1960. Three blunders in the 1962 translation have been corrected by the editors (game theory instead of the play theory, oligopolist instead of oligapolist, market economy instead of marketing economy). Throughout the book, a number of further minor corrections of obvious typos, etc. were necessary, but we have tried to keep them to a minimum, wishing to provide the reader with Schmölders' original papers.

'A contrasting programme to rational theory' is translated from Günter Schmölders, *Verhaltensforschung im Wirtschaftsleben*, Reinbek bei Hamburg: Rowohlt 1978 (Rowohlts deutsche Enzyklopädie 379).

'Socio-economic behaviour research' first appeared in *German Economic Review*, 1, 1963, pp. 6–16. (The term 'tax morality', used twice in the original text, has been changed into the more common 'tax morale'.)

2.1 Man as a social being

If the picture of man as a social being, i.e. man in all his social and human relationships, is to be complete, it must include that field of human behaviour which is defined as 'economics' or 'the business world'. In considering this sphere of life, we are apt to be misled by the competition for markets and prices, by the struggle of all against all for material success, into thinking of the well-worn ideal type *homo economicus*, an isolated specimen who is dominated entirely by the endeavour to achieve maximum benefit in competition with all the other equally independent men motivated by the same desire. In the economic theory of the nineteenth century, this economic man – whom Adam Smith still regarded and described as real – was turned into a fictional type; this made it possible in theory to reduce man's economic behaviour to a single function isolated from the great variety of human behaviour and activity, and thus to see the entire economic life as a merely mechanical interplay of the forces of quantities and markets, prices, income and rates of interest.

Although we gained valuable insight from this individualistic and abstract economic theory with its 'models' and 'functions', it is now necessary to amplify and complete it by looking again at the social element of human behaviour in economic life and to analyse it scientifically. An economic theory of 'models and functions' is, for instance, quite unable to make a prognosis. It is impossible to make predictions when, for reasons of simplification, we suppose the behaviour of economic man to be constant and typical. Forecasts can only be made if we know what is constant and what is variable and if we are aware of the modifying factors, such as different group standards and leads, or the private habits and goals of the individual. The simplified picture of man and his behaviour, which might have been adequate in the subsistence economy of past centuries, can no longer help us today in the interpretation of the fact that the Western world is moving more and more towards an economy of prosperity, if not affluence, in which hunger and basic needs no longer dictate production, but where the producers have to try and create markets by persuasion. Whether and to what extent the decisions of economic man can be influenced by clever methods of advertising, whether they are 'manipulable' or can be made so, can only be investigated against the background of society as a whole – not by a hypothesis of individual behaviour but by observation of groups and peoples.

A similar development, which takes into account the social element in human behaviour, can be observed in other sciences, not merely in those which by their nature are apt to deal with groups rather than individuals, such as sociology and ethnology, but also in the central studies of human behaviour, i.e. psychology and anthropology. Not only has social psychology been with us for several decades now, and as an independent study has stepped between psychology and sociology, but the social elements of human behaviour are more and more being incorporated into the theories of individual psychology and psychiatry. While Freud stopped at the concept of 'drive' as the final explanation – just as medicine in the past was sometimes content to explain a disease by 'disposition' – we are today able to understand the diverse drives and tendencies of man and even some of his bodily functions and diseases in their social context. Anthropology has completely freed itself from individualistic bias, and sees man as a socially determined being. It is Arnold Gehlen's achievement to have brought sociology and anthropology together and to have shown that the elementary categories of anthropology like 'action', 'relief', 'channelling', or concepts such as 'norms' and 'institutions' cannot be investigated by a study of the individual in isolation; Portmann and other animal psychologists have taught us to understand that man, neither 'autophagous' nor 'heterophagous', requires the social environment even as early as during his 'second embryonic stage'.

1. It goes without saying that economic policy and practice do not reckon with the individual *homo economicus* but with ordinary people whose behaviour is conditioned by their social environment and influenced by group standards and institutions of various kinds. Nor can economic theory, with its higher degree of abstraction, today be content with a simplified individualistic image of man if it is adequately to interpret the complex features of modern economic life. Even the smallest theoretical unit, the so-called economic subject, which makes economically relevant decisions about buying or selling, saving or spending, hoarding or investing, is normally not an individual man but a family, a household or a business. All these organisms consist of several individuals, joined together by tradition or through institutions to form a corporate body, and they act as such and not as individuals. Their behaviour is likewise governed by socially determined standards, goals and 'roles'; within the social structure, different behaviour patterns may be channelled in such a way as largely to supersede individual trends.

This becomes clear at once if we look at large units, such as a state or a community, which participate in economic life according to fixed rules and on the basis of official budgets. The same applies to families and other bodies composed of a number of people, to trades and industry, societies and associations, all of which work together and alongside each other as active and decision-taking units and as such compete in the various markets. What makes the traditional 'oligopoly' theory so unsatisfactory is its failure to come to grips with these factors of behaviour which are inherent in the dynamics of all higher organisms. Game theory is equally hesitant to give up the hypothesis of maximum profit as the sole dominant motive, although in constructing its logical, not empirical, 'models' it does take into account certain 'strategic' behaviour among economic partners. Now is the time to venture into empirical research and to understand and appreciate the socially determined behaviour of the characters whom we are studying on the economic stage.

The 'oligopolist' who actively appears in the market is really only the representative of a business unit and its governing and executive members, who are not all or exclusively interested in prices and turnover. When decisions are to be taken, other factors than the accumulation of profit enter into consideration, such as consolidation or expansion, rationalization and automation, industrial climate and prestige, to say nothing of irrational influences of all kinds or of the inner dynamic which tends to become operative especially in larger industrial units with their stable hierarchy of managerial personnel. It is characteristic of a concrete institution, such as an industrial unit, that it no longer serves one purpose only but gradually develops laws of its own and eventually becomes an end in itself. A factory, for instance, may be started for the sole purpose of exploiting a new process; but during its further development the well-run and efficient organization of the business acquires 'an importance of its own which in turn determines the attitudes and actions of its personnel who come to accept and follow its own laws and objectives' (A. Gehlen, *Probleme einer soziologischen Handlungslehre*).

This transformation of purpose can indeed lead to unforeseen results:

> A large industrial concern may have to evolve its own conceptions of internal and even external policy. Profit, previously the central objective, may become a marginal stipulation for completely revised objectives, and the reasons why profit is aimed at may change. There are today industrial concerns which voluntarily provide such generous social benefits that a new and conscious trend towards an autonomous 'prosperity combine' becomes clearly apparent. It is also possible for an unprofitable enterprise to be carried on with a subsidy from public funds in order to keep the workers in employment. (A. Gehlen, *Urmensch und Spätkultur* [Primeval Man and Modern Civilization])

When we come to big business in modern democratic society we find that consideration is also given to public opinion, shareholders and staff, and even to the voter supporting the party which stands for initiative in a free economy; the 'opinion polls' of the big firms, still a novelty in Germany, give an indication of the importance attached by industry to this aspect of public relations.

The notion, however qualified, of maximum benefit or profit being the invariable motives for action, simply cannot do justice to the factors which determine the behaviour pattern of large economic units; therefore, economic theory is now beginning to study the behaviour of market partners from other than purely financial and economic aspects and to take into account sociological and psychological influences.

2. The proposition that economic theory is concerned not with individual men but with groups of people acting collectively may serve as a general approach to the problem. Basic to any theory is the further assumption that there does not exist an infinite variety of attitudes parallel with each other, but only very few; and that in a given situation certain behaviour patterns are more frequent and can be expected with more probability than others – in other words, that men do not behave in many different ways, but are more or less inclined to conform.

If we want to know the cause of this conformity in human behaviour it is not enough to look at personal needs and traits; individual human predispositions are merely a framework within which the most diverse manifestations are possible. About the need for nourishment, for instance, we can in generally valid terms only say that it exists and that it causes the individual to take food in an amount which is not less than the minimum nor more than the maximum. These lower and upper limits vary surprisingly with different persons, groups and peoples. Not only that, but the need for nourishment as such hardly tells us anything about what foods may satisfy that need. Each individual rather has to make a selection from an assortment of suitable foods whose composition depends on the environment in which he lives; any other foods, from which at the beginning of his life he might have made his choice had he grown up among the Zulu rather than, say, the Chinese, are practically out of the question.

Another example of this selection process is language. Ruth Benedict has pointed out that in this as in all other spheres of cultural life, *selection* from an infinite variety of possible forms is the prime necessity.

> The numbers of sounds that can be produced by our vocal chords and our oral and nasal cavities are practically unlimited. The three or four dozen of the English language are a selection which coincides not even with those of such closely related dialects as German and French. The total that are used in different languages of the world no one has even dared to estimate. But each language must make its selection and abide by it on pain of not being intelligible at all.

The selection from the possible forms of demand, supply and activity, which decide the general make-up of the economy, is not made by the individual in isolation. Although he participates in the processes of development and continual change to which these factors, like all other elements of civilization, are subject, his influence as an individual is negligible. The conditions prevailing at the time of his appearance on the economic stage change only slowly and as a result of the collective activities of the many.

It is clear, therefore, that the demand with which economy is concerned, is not determined solely by the needs and traits of the individual, but largely by the norms, leads and patterns dominant in his social environment. Though 'natural' conditions of the environment – climate, nature of soil and scenery, racial peculiarities and other factors – contribute to the shaping of these norms, they are not sufficient to explain the concrete form of the demand which usually is much more rigid than natural factors would seem to allow for, much more uniform and constant than would be expected from the relative plasticity of human motives.

Every individual has, of course, a 'margin of personal freedom' (P. Hofstätter, *Einführung in die Sozialpsychologie* [Introduction to Social Psychology]). However, the size of this margin is again determined by society, social norms and status patterns; and in most cases the margin is smaller than one would think. A woman smoking in the street is not whisked off by the police for that; but the sanctions of society against undesirable behaviour – in our case, disrespect or scorn ('a lady doesn't do such things') – are just as effective as a threat of punishment, if not more so. Many a businessman would not mind very much if he had to pay a fine for some dishonesty; but the knowledge that his conduct offends against the standards of an 'honest businessman' and that his offence against good manners will bring him into disrepute among his customers, colleagues and competitors, deters him far more effectively from such behaviour than any sanction of the law.

The sanctions of society, which enforce or condemn certain conduct, vary in strength. There is the *matter-of-course* code, which no one even questions (e.g. that it is unfair to cripple the feet of young girls – which, however, was a matter of course in China until recently); and there are values and norms which take on a matter-of-course character only for certain groups of people, e.g. businessmen for whom the only measure of success is making money, irrespective of how sensibly and generously it may be spent; while other groups such as artists, scholars or monks, hold entirely different views. Then there are the *taboos*, the severest bans on certain conduct. The sanction need not amount to the death penalty: to ostracize a person can have an equally devastating effect. It is for this reason that it is so difficult for discharged prisoners to find their way back to normal life. Further, we have conventional habits and customs, against which nobody likes to offend; there are *fashions*, which are followed by only a few groups; and finally there is the margin of individual freedom varying somewhat in size according to how 'independent' a man is, how much he cares about the approval (Adam Smith: the sympathy) of his fellows – but in all cases it is a pretty narrow margin.

Incidentally, we do not see everyone battering in impotent rage against the limitations set to his free will; quite often these limits are not even felt, for

> in order that any society may function well, its members must acquire the kind of character which makes them *want* to act in the way they *have* to act as members of the society or of a special class within it. They have to *desire* what objectively is *necessary* for them to do. *Outer force* is replaced by *inner compulsion*, and by the particular kind of human energy which is channelled into character traits. (Erich Fromm, quoted by Riesman in *The Lonely Crowd*)

Recognizing this we gain theoretical access to the two peculiarities of human behaviour which offer the possibility for prognosis, i.e. *conformity* and *constancy*. The fact that different people behave in an analogous way in analogous situations, i.e. conform, although diverse reactions would be possible and perhaps equally appropriate, is explained by norms, leads and models, by which they are guided either from a sense of duty or from inertia, ambition or any other motives. That the behaviour of any one person is always the same, i.e. constant, although each time he could react in different ways, may be due to his character or temperament, as much as to tradition, thoughtlessness or mere habit.

Talcott Parsons has pointed out that the 'profit motive', so often mentioned in economic theory, is in reality not a 'motive', not a separate psychological category, but merely a consequence of the particular situation of a free enterprise within a market economy with its fixed rules, to which the enterprise more or less conforms. Whatever motives may actuate the individual entrepreneur – greed, ambition or sense of duty – his behaviour is being 'channelled' by these rules in a certain direction, e.g. that of the pursuit of profit, and through habit he keeps to that direction even if, say, profit taxation would suggest a different course of action. At the same time, conformist and constant behaviour provides (as A. Gehlen pointed out in his *Der Mensch*) the 'relief' which has become absolutely necessary to counteract the overstimulation and excessive demand arising from perpetual problems of decision. By adhering to a conformist and constant pattern of behaviour, man is able to conserve for higher things the energy he would otherwise spend on making each new decision for himself.

3. If we ask ourselves what concrete problems of economy and economic policy can benefit by a deeper analysis of socially determined attitudes, those cases spring first to mind in which 'free' decisions by single households and businesses lead to economically significant consequences. Western economic systems are distinguished from the controlled economies behind the Iron Curtain by a wider scope for free will and personal decision. Buying and selling, saving and investing, the choice of a profession or place of work, as well as performance and output, are in the Western world not prescribed by a 'plan', but are more or less left to individual decision, which itself is directed by norms and institutions of all kinds, by education and habit, by leads and taboos, and is imperceptibly moulded into conformist and constant behaviour. While the attitude of the buyer in the various markets of consumer goods and services has been closely analysed by spectacular investigations in recent years, the 'opposite' of buying, i.e. *saving*, although economically a most important process, has been sadly neglected in this respect. Abstraction in economic theory sometimes went so far as to define saving merely as not buying, and every part of income not spent was summarily set down as the population's savings. In this way, the extremely significant economic attitude of saving is being defined not through its own motivation but, negatively, through its opposite, the motivation for not spending money. It is obvious that we thereby lose every insight into the motives which induce saving, into the various forms of saving and into the influences of group standards and leads on the function of saving, as well as losing any chance of making forecasts on the behaviour of the savers.

The factors which are of importance in this connection can be deduced from a number of recent empirical examinations, of which only short mention can be made here. A new and extensive inquiry has been carried out by our Cologne Research Station for Empirical Social Economy together with the Allensbach Institute for Demoscopy, and the facts collected are at present being evaluated.

How much ordinary human factors determine the function of saving can be noticed in the interrelation of saving and age. Until he enters professional life man is normally a consumer only. Once he is earning money, the proportion of his savings, if he saves at all, varies tremendously with his age, not only with the level of his income. According to Rowntree's theory, the ordinary working man has only two short periods in the course of his life during which he can save: in his youth when he is unmarried and earns well, and again after when his children have grown up. Empirical studies in Germany have shown, however, that savings are highest just after the establishment of a family and much lower in the theoretically 'most propitious' period; the need for security outweighs the income factor. In practice, this means that there is a large class of potential savers, particularly younger people up to marriage, who do not put by any money from their sometimes quite considerable incomes; thus there is a clear task for education in this field.

Max Weber has directed attention to the great importance of religious group standards to hard work and thrift. The 'saving mentality' again varies considerably with countries and nations; it has frequently been noted that thriftiness increases in a northward direction and decreases towards the south, which perhaps is due to climatic conditions and the need to provide in time for longer and harder winters. However, from the relatively weak inclination towards thrift of the Swedish population it is evident that factors of social environment play a role besides those of natural environment. Sometimes, a much-quoted 'national character' encourages the sense of thrift as, for instance, with the Scots or the Swabians.

The mentality of the 'down to earth' businessman is likewise influenced by group standards. The cool calculator that economic theory presupposes him to be displays in reality many human, all too human traits. Similar to the 'prestige consumption' of the consumer, we have the 'prestige investment' of the industrialist bent on enhancing his personal reputation. There are examples of corporate behaviour in professional organizations, syndicates and other groups, where the self-interest of individual firms or people recedes into the background. Here is the management's report of a large industrial concern:

> No enterprise lives in economic isolation; it is part of the social order of its time. It affects this social order by its decisions and actions. At the same time it is open to decisive [*sic*] influences from that social order which, expressing the opinions and wants of our fellow men, in their turn affect business decisions. These influences may be so strong that it depends on them whether an enterprise is to develop and thrive, or to wither and die.

When we come to the young generation's choice of profession and place of work we see that it is dominated much more by group standards, education and social environment than by any 'economic' considerations in the ordinary sense. Social prestige, rather than purely financial criteria, still determines the value set on occupation, at least in Europe. The social grading of professions slows down the decline of economically obsolete occupations on the one hand, and the rise of new professions an the other; in the United States social mobility is much less restrained by traditional inhibitions.

Finally, modern industrial psychology has reliably shown that solidarity and group standards are crucial in their effect upon efficiency and productivity of individual workers. Karl Bücher's first reference to the connection between work and rhythm (*Arbeit und Rhythmus*, 1896) has been succeeded by hundreds of empirical studies ranging from human relationships in working life to the 'industrial climate' in our day.

In contrast to former views we now look at economic man no longer as an isolated individual but as a being influenced and moulded by his natural and social environment who, without thereby losing his individuality, is nevertheless limited and directed in his actions by factors outside himself. The individualistic abstraction of an earlier economic theory is thus seen to emanate from the wishful thinking, inherited from the Enlightenment, that man is autonomous and rational. Now we must not, of course, veer to the other extreme ('you are nothing, your nation is everything') and consider man as no more than a socially determined being after the fashion of Marxists and fascists. Empirically, only a middle course is justified which regards man *not only* as an individual endowed with a free will, who can rise above nature and become largely independent of the judgement of others, *but also* as a being who in his very independence remains imperceptibly moulded and influenced by his environment, who frequently does not at all aspire to full independence or autonomy, except perhaps in a few limited spheres, but who is happy within the group and submits to its rules. Even in his economic behaviour man is after all a social being.

2.2 A contrasting programme to rational theory

2.2.1 Introduction

The degeneration in current economic theory which, although it can be seen globally, produces its drollest effects in the German-speaking area, of course has its causes and intellectual basis. One of these causes is surely the arbitrarily narrow and, not infrequently, almost doctrinaire delimitation and enclosure of the field of 'economics' as part of political design and theoretical research. While the weight of facts has long forced economic policy to escape these narrow boundaries and alternately cross over into the realms of foreign, domestic, social, legal and cultural policy at one and the same time, economic theory hangs back on the playing field of the 'economic' in its narrowest sense, kicking about the ball of cause and effect according to ever more refined rules. This 'pure theory' is abstract and independent of time and place; time and place being precisely the primary conditions which the politicians' specific design brief sets out to tackle. Two of the fundamental premises on which theory used to be based in the past, namely the assumption of a practically infinite speed of adaptation and the *ceteris paribus* hypothesis, are never even close to being correct in the reality of economic policy; it is the moment in time itself, and the changing circumstances, reactions and side effects that are more likely to be the actual factors in every opportunity for political successes and risks, and thus those in every opportunity for successes and risks in economic policy as well.

Thus economic research that works for the love of it, not just for its own sake, should pay particular attention to both delayed adaptation and the diverse environmental factors that thwart operation of the *ceteris paribus* relationship, both being ultimately forms of expressing human behaviour in the broadest sense. What economic theory lacks, including dynamic development analysis that takes into account the moment in time, is primarily knowledge of the behaviour of humans who, actively or passively, are the subjects and substrata of the economy and economic policy. The route to achieving this consists of extending the knowledge obtained above and beyond place and time, using the theoretical model of an abstract economic society, with realistic socio-economic behaviour research that includes the human, all too human factor in the circle of economic research data.

The expression 'behaviour research' could be misunderstood and confused with the school of 'behaviourism' which emerged in the United States. It is therefore advisable to make clear from the outset that our 'behaviour research' basically intends to draw on the anthropological sciences in their entirety for information on what drives economic or economically relevant human action; from the psychology of the conscious and unconscious (including behaviourist psychology), via biology, to cerebral research on the one hand, from sociology and history, via social anthropology to linguistics, and comparative veterinary ethology and sociology on the other. The usefulness of this extended questioning in fact lies in other human sciences' receptiveness to results and approaches; it is based on the acknowledgement that the economy is human action, but that under no circumstances is human action the economy, so that it would be absurd to explain it by economic categories alone or to want to restrict it to the field of 'economics'.

Economic science has so far been, and by and large is still, decidedly prejudiced against inclusion in the circle of economic research topics of the 'human factor', this human factor being mostly expressly or tacitly omitted from textbooks. Advocates of a supposedly 'exact' economic theory are only too easily led to arrogantly dismiss the psychological field as the 'happy hunting ground of the charlatan and the quack',[1] or to abandon it to 'minds averse to the effort of exact thought'.[2] At least, consciously or unconsciously, theory still governs the basic concept of *homo economicus* acting rationally, in that it pushes it into the future, 'when the technique of economic analysis will be sufficiently advanced to analyse the results of neuroses and confused thinking',[3] rather than researching rational ways of behaving. On the other hand, under consciously abstract conditions, every economic development model leads to a point at which this group of conditions proves to be too limited. Human behaviour's determining role and, at a deeper level, the determinants of precisely this behaviour, have been neglected by economic science for far too long. Those who formulate 'pure' economic theory try, like Alice in Wonderland, to play croquet without fixed points;[4] the fixed points we are lacking are the 'rules of human nature', in other words, the behaviour constants of humans engaged in economic activity, which behaviour research must address.

Modern economic theory's dismissive attitude towards inclusion of the 'human factor' is all the more amazing since, initially, economics experienced a very definite tendency towards 'psychological' hypotheses. Adam Smith is known to have regarded his theory of moral sentiments as significantly more important than his later economic science work;[5] Ricardo's idea of humans engaged in economic activity was based on Bentham's solid, utilitarian psychology, and for many years hedonism was the ultimate determinant in economists' opinions of human actions at a time when it had long since been discarded by philosophy and psychology.[6] Thus Jevons built the theory of marginal utility entirely on the old basic hedonistic precept which, as in the case of Ricardo, culminates in the greatest general good being achieved if each individual strives for a maximum of preference or even a minimum of indifference. O. Morgenstern indicated that nothing changes if one calls 'preference' 'utility', or 'utility' 'economic satisfaction' (Pareto), or simply calls the 'utility score' the 'score'. In his 'Principles', Alfred Marshall who, in all seriousness, regarded economics as a special branch of psychology, certainly simply replaced the word 'pleasure' with 'satisfaction', 'as if such verbal changes cleaned his skirts of hedonism'.[7]

Subsequent generations of economists have attempted to politely show psychology, on which subjective value theory was based, the economic theory equivalent of the door, and to replace it with a supposedly purely objective theory of 'selective choice'; H. von Stackelberg is primarily worthy of mention here, together with J.R. Hicks.

> It is no longer the impression perceived directly by the human psyche, but the externally visible act of economic choice, which heads value theory. There is no explanation why man chooses thus and not otherwise. The indifference curve diagram only expresses *that* choice is made in a certain manner.... Not only needs in the old sense, but man's every conceivable means and those of humanity as a whole, may provide the basis for evaluation of the various combinations of means. Value theory extends to the pure theory of the means–end relationship. It is abstract, colourless, has become 'glazed', one might almost say, but its efficiency is simultaneously brought to the highest conceivable level.[8]

Value theory which, as a result, becomes an abstract theory of selective choice, thus consciously dispenses with a complete explanation of economic activity; it expressly leaves this explanation to psychology:

> Certainly an act of choice like that above is a manifestation that requires an explanation. There is absolutely no manifestation that would not require an explanation. To obtain an explanation, one must in each case investigate precisely the conscious or unconscious grounds on which the person in question preferred Option A to Option B in the situation in which he found himself at that moment. This explanation would certainly lead to some interesting conclusions. However, it has nothing more to do with economic theory. Rather it forms part of other disciplines' territory, above all the discipline of psychology.[9]

Value theory's resignation in the face of the motivations on which value concepts are based was derived by Wesley C. Mitchell from the recognition that hedonism is a useless psychology, so value theory must try to manage without psychology if it does not want to dispense altogether with the classic analysis of value and with the marginal utility analysis of value. Instead of replacing the marginal utility school's unusable psychology with a better one, modern value theory eliminates psychology by retreating to a mere theory of selective action. This is how this theory managed to account to itself not so much for how men really behave, but for how they would behave if they followed the 'logic of the money economy'.[10]

G. Myrdal was the sharpest critic of this evasion of psychological questioning. He called it 'the role of value theory to conceal the flaws in one's reasoning, by virtue of which one arrives at political norms and which, without value theory, would all too obviously come to light'.[11] It therefore also seems absolutely comprehensible to him 'that the theory constantly comes into conflict with modern depth psychology, wherever the latter's starting point, since all schools of psychology agree at least outwardly that the popular introspective rationalism which has been given a scholarly formulation by hedonism, is not sustainable'.[12]

H. Mackenroth has rightly arrived at the conclusion that by dispensing with the psychological explanation, subjective value theory would also become untenable, 'a subjective value theory still asserted for this case becomes a purely formal, mathematically padded game of words'.[13] Rittig also exposes what is known as the casting out of psychology from economic theory for what it is:

> It therefore simply consists of avoiding saying anything about the internal psychological contexts dependent on and triggered by external variations in quantities of goods, but [it] assumes that these internal psychological contexts – the Devil, and at best Gossen and Pareto, knows on the basis of what manipulations these internal psychological contexts achieve the size they do – are a quantitative reflection of the objective material world.[14]

Despite these realizations, a generally accepted reflection of human drive, and indeed of economic activity, is still missing. In recent times only very few voices have claimed that they have plugged this gap in economic theory. F. Perroux expressly protested against 'both stopgaps', because we should be thankful 'that the economic scientist has spared so much effort and is able to explain away so much ignorance – the data that need not be explained and the "external economic factors" to which, by definition our profession need not extend its mastery'.[15] Characteristically, it is the country whose willingness to experiment with economic policy has most clearly demonstrated the chasm between theory and practice, namely Australia, where the realization has been expressed courageously 'that economics ignores the complexity and irrationality of human nature, and the economists' map of the world is unnecessarily misleading';[16] E.R. Walker supports a study of economic 'behavior', to whose understanding anthropology and psychology, quite apart from sociology, used to provide equal contributions, together with those of economic science. Clumsiness and error, curiosity and inertia, imitation, tradition and institutional barriers are accordingly equal factors that do not just have a modifying effect on basically rational behaviour, and which it would certainly not be beneath the dignity of economic science to investigate; economic policy 'does not demand less, but better economic theory'.[17]

Jean Marchal has also claimed finally to have built up economic science 'from a mechanical science to a human science', which would have to investigate economic phenomena for their true causality. 'What economic science provides us with is essentially a technique for rational action. . . . But it is now the case that the economy is a human science and that there is always, and will always be, a little secrecy in men. One would have to mechanise man in order to turn economic science into physics or an economic logic' and 'transform [it] into a perfect robot whose reactions, in their entirety, could be predicted from the outset'.[18] According to Marchal the nature of economic science is mapped out by the uniqueness of the economic phenomena that happen *in time*, but which in the process are almost always of a discontinuous and ultimately psychological nature, so that they too are open to explanation from this very point in time. Using the example of a taxpayer who reacts to an additional tax burden by easing up on his efforts to earn money, Marchal proves that human behaviour's objectives, assumed by classical theory to be fixed, change in the course of the economic process and thus are anything but 'data'.[19]

The first thing to fall easy prey to this realistic view of economic activity is the idea of a *homo economicus* on which, even today, economic theory is still largely unconsciously based, and which is in turn even partly accepted by psychology, as a type of 'economic man'.[20] But

> We anthropologists and sociologists have made it abundantly clear . . . that a human being truly possessing the characteristics ascribed to homo economicus in the textbooks has never existed. There has never been a society that pursued the economic determinism formulated by Marx and Engels as a cardinal principle. Total equality is an economic Nirvana, over and above place and time. The buzzwords are doing the rounds again, but I can't connect it with any reality known to me in anything more than an extremely forced and abrupt manner. I appear not to be alone in this conclusion. Scholars such as Mayo, Mitchell, the Clarks and many others have arrived at similar conclusions.[21]

Economic theory's self-contemplation characteristically deviates here from conjunctural theory, which absolutely cannot come to terms with the idea of a *homo economicus* acting rationally with his 'perfect foresight'; as early as 1935 O. Morgenstern wrote: 'The improbably high-flown claims made of the economic subjects' intellectual capability simultaneously prove that no ordinary people are included in equilibrium systems, but demigods who are at least equal to each other should ever the claim of perfect foresight be fulfilled.'[22] Meanwhile Morgenstern has made a much-noticed contribution to economic theory development with his 'game theory', it appears to be the calling of Huizinga's *homo ludens* to effectively soften the idea of humans' motives for behaviour.[23]

Monetary theory, to the extent that it does not limit itself to a more or less mechanical view of financial scale and circulation processes, cannot get to grips with the idea of a economic man acting rationally in economic terms either. Gerloff compared 'homo economicus' to 'homo ambitiosus'; the most powerful motive for not only the will to work, but also every social occurrence, is the striving for recognition and personal elevation and honour. Any such characterization is subject to the risk of reality being viewed from the attractive logic of the drawing board. Nowadays history too warns specifically of assuming purely rational motives on the part of active humans. 'It is indeed only in exceptional cases that the politician acts solely for pure "reasons of State", very often he is guided more by irrational motives, almost by his stupidity.... One must use... a typical ideal, such as homo politicus, as a heuristic aid only in the full awareness that no true reality... is ascribed to it.'[24]

On behalf of monetary theory Hicks long ago claimed that it must remain apart from what is known as the theory of equilibrium, and must instead be brought into a closer relationship with risk theory. 'In its most important aspect the speed of money circulation is a function of risk.'[25] Since risk is now in this respect by definition completely incompatible with the assumption of perfect foresight, as perfect foresight removes every risk, Morgenstern too is of the opinion that risk theory as a whole remains distinct from equilibrium theory,[26] just as monetary and economic theory have already escaped from it. That this emancipation must be completed in view of the lack of adequate market transparency that is also apparent in value and price theory as a whole too has already been mentioned above, whereupon the playing field of 'pure theory' breaks down altogether.

2.2.2 From historicism to prediction

The measure of economic science's efficiency is economic prediction. A theory that contents itself with retrospective explanation of economic life's functional contexts, without simultaneously helping to create a foundation for interpretation of the forces pointing to the future based thereon, has missed its vocation. J.M. Clark rightly criticized the fact that some economists seem to regard their theorems as an 'end product' rather than as an analytical tool.[27]

Approaches to an accordingly broader foundation to economic theory can be found in institutionalism, which modern social psychology, developed in conjunction with American pragmatism, tried hard to make bear fruit for economic theory; only with institutions' research do we obtain the constants indispensable for every prediction which abstract equilibrium theory used not to offer. A borrowing from anthropology confirms this fact; A. Gehlen poses the very question that is important for our prediction problem:

> How, in view of his cosmopolitan attitudes and reduction of instinct, with all the improbable plasticity and instability he potentially contains, does man actually arrive at a foreseeable, regular behaviour that can indeed be predicted with some certainty under given conditions, in other words at behaviour that could be called quasi-instinctive or quasi-automatic, which in his case replaces the truly instinctive and which obviously first defines the stable social context? Asking this question is called raising the problem of institutions. One can almost say that in the same way as animal groups and symbioses are held together by trigger mechanisms and instinctive movements, human groups are held together by institutions and the initially 'self-determining' quasi-automatic habits of thought, feeling, evaluation and action in them, which simply by being habits set in institutions polarize, habitualise and thus stabilise themselves. Only thus do they become foreseeable . . . to a certain extent.[28]

Only, according to Gehlen, with the destruction of institutions will human behaviour also be 'compulsive'.

In referring to the role of the institutions as the factors determining the constancy of human behaviour, Gehlen disassociates himself from 'polythematic theories' on the structure of human impulses.[29] Without exception these attempts fail and for the same reasons as the type theories, namely the arbitrary nature of the settings.

> Man has explained power, egotism . . . and much else . . . as the 'essence' of man. McDougall now recognises 18 basic instincts . . . , whilst Watson makes it around 50 already. Schaffer (The Psychology of Adjustment) maintains that from several hundred authors Bernard

(1924) ascertained 14046 'human activities', which have been characterised as 'instinctive'.

Such a plethora of impulses would make discovery of behaviour constants a hopeless task if, in the institutions, we did not possess specific schemata by which, experience tells us, human activity is accustomed to being most strongly guided.

Like Gehlen, American anthropology also places the emphasis on institutional moulding of the intrinsically plastic structure of human impulse.[30] Given the fact that the human character is a 'cultured product of society', the fact of 'man's historic point of view' encroaches on the point of view central to the considerations of Dilthey, first and foremost, and the life philosophy that followed in his footsteps – José Ortega y Gasset in Spain, for example.[31] The existence and structure of an institution, which to a great extent has a character-forming effect, are particularly exposed to the vicissitudes of history; this means though that the social and historical 'laws' that can indeed be ascribed to institutional facts, are also made relative in historical terms.

From this American institutionalism has drawn the conclusion that there can be no general, i.e. absolute, economic theory valid for all times; this school therefore promotes 'a theory for the American economy of the 20th century'.[32] The similarity between this outcome and the German historical–ethical school's theories is obvious; without much in the way of learned additions Schmoller and Wagner, Roscher and their successors have deduced the 'lawfulness' of economic events from environmental conditions and norms that have become part of history and from this derived the impact on it of the behaviour of humans engaged in economic activity.

According to B. Malinowski, even psychoanalysis is only comprehensible in conjunction with a specific social order by which the facts it analyses are shaped institutionally. Freudian theory, for example, would have to be modified accordingly for the matrilinear form of society:[33] 'If we apply a short, even if rather rough formula to either form of society, we can say that the Oedipus complex contains the suppressed desire to kill the father and marry the mother, whilst in the case of the Trobriand Islanders with their matrilinear society, the desire consists of marrying the sister and killing the mother's brother.'[34] These comparisons too shed new light on the institutions' determining power over man, his behaviour and the motives for his behaviour.

After all that, the constant methods of behaviour indispensable for any prediction can obviously be derived most readily from the respective institutions that have become historic. All humans living in a specific institutional setting are subject to this determining effect, whereby influences from many institutions come together and, should the situation arise, external influences, possibly from neighbouring cultures, have a modifying effect.

With this finding the German historical school, with its contemporary and realistic outlook, obtains new justification that cannot be overlooked. On the other hand modern theory's functional contexts could only be used for economic prediction on condition that they express invariable relationships. These functions are, however, obviously chosen as seems easiest from the point of view of economic argumentation; in each case they link two factors having the nature of a monetary value, e.g. in the consumer function the growth of monetary income is linked to the increase in consumer spending, or in the investment function, interest is linked to the financial capital invested. These functions only bear fruit for the prediction if it is possible to determine true behaviour constants within the bounds of these values, which would, however, have to be proved first. The supposition also completely contradicts the possibility of finding such constants exclusively and indeed only within the bounds of these easily defined economic values. It seems more promising not to look from 'top' to 'bottom' for such constants, where they are most useful, but conversely to determine to what extent human behaviour exhibits invariable structures at all. If one discovers laws of human behaviour in this way it is then easy to investigate the latter for their economic relevance – hence behaviour research.

2.2.3 Borrowed from psychology?

Research constructed in this way necessarily enters the sphere of all the sciences concerned with human behaviour and its motivation, i.e. the anthropological sciences in the broadest sense. In the process the question immediately arises whether these sciences' previous results already justify optimism that our question will be answered. Gehlen[35] believed that in this regard the field was largely unexamined, and this is confirmed by a glance at anthropological literature.

The fact, though, that psychology as a human behaviour science is itself split into several movements when it addresses problems of motivation and drive represents a particular problem for economics. Like Lersch[36] we can perhaps identify these movements as 'athematic', 'polythematic' and 'monothematic'. Freud, like Lersch, is a proponent of the monothematic, McDougall of the polythematic and Gehlen of the athematic theory of psychological drive, which rejects any connection with inflexible drive objectives in terms of instinct theories, and takes as given the fact that the plasticity of the structure of human drive is shaped by society's institutional framework; animals' 'instinctive' behaviour is the opposite of human behaviour's 'acquired specialities'.

One may apply this or a different interpretation, but there can be no doubt that in psychology's comprehensive material all movements and schools are offered a treasure trove for economic behaviour research, giving rise to the supposition of rich findings. In particular, consulting this material may help economic science, using selective, eclectic psychology, to separate out arbitrarily personal, economically relevant sub-motivations in the case of individual 'rational or primitive persons' such as 'preference for cash' and 'urge to save' on the one hand, and 'desire to invest' and 'tendency to consume' on the other, from the great, interrelated power game of fear of life, and love of life, introverted and extrovert individuals, groups and masses, the conscious and that which has been termed 'subconscious' or 'unconscious'; it unexpectedly makes it absolute, quantifies it and 'counts' on it as if it were independent values, original data or general motives, alongside which other constant behaviour or variable mood factors of economically active humans, which perhaps slip less smoothly into the prepared pattern, would have decreased in importance.

Faced with this eclectic psychological insight, 'financial psychology'[37] is thus protected from having anything to do with any relationship whatsoever between humans and the world of goods, or 'macroeconomic' processes in the spheres of production and consumption, but is concerned essentially with man's attitude to money and its value, his motivations and actions being more or less comprehensible due to basic psychological positions, endothymic feelings, or primitive reactions, which explain them. Complexes such as envy, meanness or greed, ambition, striving for power and craving for admiration, laziness, shying away from responsibility and pedantry, discipline, self-respect and a social conscience et al. are generally more widely applicable and, at the same time more vivid explanatory reasons for human actions than temporary measures such as the 'borderline tendency to consumption' or the Keynesian 'liquidity preference' with which economic theory now struggles; theoretical economics' insistence on a primitive hedonism which modern depth psychology has long since left behind is all the more disconcerting since, for its part, psychology has already moved on to closer analysis of some of the most striking ways in which humans behave in economic life and, *faute de mieux*, has allocated them to their categories, since economic science has not been able to provide psychology with any suitable terms.[38]

Freud thus demonstrated his characterology using man's attitude to money, which can be either a fixation on 'greed' or 'meanness' determined by early experiences, or an 'ambivalence' too, i.e. an absence of this fixation. In addition to the sexual sphere which, in the early days, unilaterally came to the fore, further developments in depth psychology have allowed recognition of the central importance of fear, the need for admiration, and numerous other stirrings of the 'primitive being', which completely dominate the behaviour of humans, not infrequently despite better insight into their 'ratio'.[39] Characterology almost contrasts these 'needs' that emerge from the 'endothymic basis' with the 'expressions of will' based on rational processes;[40] according to McDougall rational acts of will are necessarily always based on some 'propensities' or other, which are rooted in the sphere of inclination.[41] J.H. Schultz claims to have proved that the majority of stomach and intestinal diseases can be ascribed to 'financial trouble' in particular;[42] at the very least material interests and 'concerns', i.e. first and foremost economic, are the most powerful factor for emotions and actions that are in no way controlled by rational considerations alone, not even for the most part.[43] One must think of it as though basically individual experiences lead to certain fixed ideas which can trigger significant effects. In the case of individuals they are mainly early childhood experiences of the maternal relationship, hence the opinion that it is above all the sexual sphere which gives rise to the field of disorders.[44]

Around the time of the First World War, to which Freud's theory dates, the picture had, however, in the meantime shifted such that the main drives are not longer set in motion by sexual content, but by fear. The ideas that can be ascribed to fears now have the ability, far more than sexual ideas, to infect the masses. There are very few sexual 'infections' of large numbers, such as the obsessive belief in witches, for example. The concept of panic, on the other hand, is ancient and can be proved in every age. Economic activity, viewed as a mass phenomenon, is much more governed by these (infectious) feelings of fear than is generally assumed.[45]

A further motive for human action, which helps to explain many economic processes, is the need for admiration. After both world wars the need for admiration largely worked to regulate general fear. Nowadays, as is still to be expounded, psychological empathy with mass ideas of economic and financial policy are totally lacking in many respects.[46]

Classical depth psychology[47] is based on the hypothesis that human behaviour is determined by needs to which specific principles pose alternatives. For example, in the case of Adler the 'principle of community' opposes the 'principle of preference', principles that trigger each other or which can become their opposite respectively (change of form). Stirrings of need are inhibited, or at least controlled, by reason; often though they are in truth only 'rationalized' by it, i.e. elevated to the consciousness of the 'ego' on spurious grounds, that a person then finds it hard to think of himself as a passive driven being. The rationally determined 'ego', the so-called 'cortical person', the 'new cerebral man', the 'superego', the 'person stratum' or whatever the various schools call the higher rational principle, is thus not the motor for the impulses, needs and drives of human activity, for the actual (or even only) vital source of energy stemming from the 'primitive person' or 'depth person', from the 'primitive cerebral man', arising from the 'endothymic depths' or the 'id', but to a certain extent only the steering wheel or gears. Even in 'change of form' the needs that determine our actions always shift their weight to the egocentric, inhibiting, introversive principle, or at any rate always to the 'lower' principle. We need not pursue in detail here the different ways in which psychology's various schools of thought interpret or describe this process; their agreement with regard to the relative primacy of the sphere of drives for the nature and extent of 'needs', and the resulting development of an informed opinion for practical action is sufficient, however, to take the idea of *homo economicus* acting rationally to the extreme and to identify the high status of arational drives in economic activity too.

As mentioned, a plethora of other, special disciplines come under consideration, together with psychology, as a source of material for research into economic behaviour; human behaviour is co-determined by many factors which are the subject of scientific research in the most widely varying contexts. For example, when researching primitive cultures, ethnology, to which W. Gerloff drew attention, has identified a type that is the complete antithesis of *homo economicus*, namely *homo institutionalis* governed by the unwritten law of custom and handed-down traditions, whose way of behaving is in no way ruled by his economic self-interest, but not even by respective prevailing statute law either.[48] Reference should also be made here to what is known as veterinary ethology (veterinary psychology), to the chimpanzee test with vending machine tokens carried out by R. Yerkes, for example, which shows that monetary greed and acquisitiveness, even the need to hoard and 'liquidity preference' are just as likely to be encountered in animal behaviour.[49] Impartiality of questioning and receptiveness to different trains of thought may contribute more to development of a realistic economic science than esoteric absorption and eclectic narrowing of a pure theory restricted to the narrow 'economic' circle of data.

2.3 Socio-economic behaviour research

Ten years ago, in the *ORDO-Jahrbuch* [ORDO-Yearbook] for 1953, the first detailed programme of research on empirical social economics was published. Meanwhile, under the title of 'Socio-Economic Behaviour Research', it has been put into practice on a wide basis and can already claim a number of preliminary results.[50] Although one single decade can never amount to more than a short chapter in the history of any science, this anniversary does perhaps justify a progress report, giving an interim survey of the research work (still, for the greater part, in its infancy) which was undertaken in pursuit of the programme published ten years ago.

The present report is purposely confined to studies undertaken or originating in Cologne; considerations of space alone would forbid the inclusion of all similar research work being undertaken in other countries. The report also excludes the focus programme (*Schwerpunktprogramm*) financed in 1958 by the 'Deutsche Forschungsgemeinschaft' (German Research Association) on Socio-Economic Behaviour Research as a consequence of which some first steps towards research in this new direction were taken in various other German universities; however, no comprehensive survey of their results has so far been published.[51]

After several years of preliminary work, in 1957 Cologne succeeded in establishing its own Research Institute for Empirical Social Economics. Based on the existing University Institute for Public Finance in which studies in fiscal psychology were being carried on, the institutional framework was created for extensive surveys and for interpretation and exploitation of research data from public opinion and market-research institutions. In 1960 the establishment of the Central Archive for Empirical Social Research was accomplished, which is already in active cooperation with about 70 outside institutes and research departments conducting a regular exchange of information on current, past and projected surveys. Another important institutional condition for the Cologne behaviour studies is the calculation centre of the Institute for Applied Mathematics, the use of which has kindly been permitted for our Social Economics Research Institute. The punchcard department of the University with its mechanical equipment has also repeatedly been of help in sorting and duplicating punchcard records both of the Institute and those sent in by others.

The principal aims of socio-economic behaviour research as detailed in the above-mentioned 1953 programme have remained unchanged: the actual behaviour of people in the real economic world is to be investigated systematically and thoroughly, an essential point being the distinction between elements of said behaviour remaining constant and those subject to change.[52] To begin with, such research is in the nature of a supplement to, rather than a revision of, economic theory originally founded on the hypothesis that any individual economic 'subject' would behave in a more or less 'rational' way. Starting from this hypothesis, the further development of economic theory has, in the meantime, modified this conception by welding into it all human preferences, hopes and fears, people's habits and the effects of institutional training and attachments; in this connection it should be remembered that our increasing prosperity is gradually driving us into an economic reality allowing a by far wider scope for those 'human, all-too-human' motives and behaviour patterns by which real human beings are swayed and which tend to blur the clear-cut line of rational decision.

From the very first, our researchers were eager to avoid the error into which the former 'psychological' school of economic theory had fallen, i.e. the mistake of founding hypotheses on a rationalizing introspective 'psychology' which could hardly be subjected to any kind of empirical proof. The topics and hypotheses of empirical research, in contrast, can be founded only on facts and data won on the basis of systematic investigation into economic reality; the methodical and technically refined processes of empirical surveys are available to confirm or refute, with complete objectivity, any hypotheses evolved from systematic research work. This process should not be placed on a par with the 'empiristic induction', of which, with some reason, the Historical School of Economics has been accused. It would be truer to designate the method of our behaviour research as a kind of 'empirical deduction', drawing progressive deductions from hypotheses built on data and facts and modified repeatedly until they stand the final test of actual experience.[53]

At the start only few abstractions are possible; it begins with simple descriptions of certain behaviour patterns of certain people under certain space and time conditions. Analysing the individual's confidence in the value of money, for example, first people's attitudes towards the stability of the value of money and currency will be tested under various realistic conditions; any deductions made from these findings – regarding the consistency of such attitudes, their dependence on information and experience, their variability in different social groups, their connection with psychic factors, and, very important, their correlation with actual behaviour (spending habits, saving, investment) – will be carefully checked by actual facts.[54]

The results, then, will be used to confirm or to modify the initial hypotheses concerning the causes of, and the laws governing, actual behaviour. In the next stage these hypotheses will be submitted to 'harder', at least more specific experimental (or experiment-like) tests. The final stage may be the formulation of a general theory of the behaviour of people during inflation.[55] True, earlier attempts have been made to formulate such a theory (for instance in the form of Gresham's Law), but as a rule these attempts have to be more or less corrected and supplemented in the course of empirical research quite apart from the fact that there is always a chance of coming across entirely new sets of facts and new information. In any case, this method of analysis cannot possibly be described as inductive 'conclusion from the particular to the general'; on the contrary, the 'general' is continually being tested and either confirmed or modified by the 'particular'.

A few examples taken from our Cologne research projects during the first decade may help to demonstrate the methods used and show in greater detail some of the results obtained.

In investigating 'fiscal psychology', i.e. motivation and behaviour in the field of public finance, it is of course very important to take into account the dynamics of public opinion, the process of legislation and administrative routine in the formation of the budget and the law in general. Even so the first place among research subjects in this field must be accorded to the effects of taxes and expenditures, both of which can be influenced by an active fiscal publicity.[56] These three topics formed the subject of a comprehensive survey undertaken after intensive preliminary studies in 1958 by interviewers from the Bielefeld EMNID Institute among a representative cross-section of the West German population – about 2000 adults. The first object of this survey was to find some basic facts from which to evolve fiscal-psychological theories regarding the effects of taxation and expenditure, and the degree to which relations of citizens to fiscal authorities can be influenced. With this purpose in mind, the questionnaire for the interviewers was prepared containing questions and cross-questions revealing people's readiness to shoulder civic responsibilities, the conscious and unconscious attitudes of citizens to state and community, to fiscal authority and taxation, to state subsidies and relief. In addition, information was sought on people's knowledge of certain taxes and items of state expenditure, on how individuals felt affected subjectively by income, consumption and trade taxes, and many other matters.

Analysis of the results of this inquiry made it possible to test the hypothesis that a special 'tax morale' exists, a morality which deviates characteristically from the ordinary business morality of everyday life. Researchers examined the connection between such tax morale and the technique of taxation, between these and the subject's perceived tax incidence and his general attitudes towards taxation and the state in general. Furthermore, they collected material on the 'taxation mentality' of Germans and confirmed the effectiveness of the famous 'Cambridge rule' concerning the subjective incidence of taxation; they correlated contrasting attitudes such as the urge to make claims on the one hand and the willingness to perform public duties on the other; they tested the degree to which it is possible to transfer the socio-psychological interdependence of 'contact and sympathy' to fiscal psychological facts, and made appropriate adjustments to existing assumptions, etc.[57]

Numerous results of this analysis have already been published;[58] others have been used exclusively as a foundation for later special studies, such as (to name only three examples): to test some more specific hypotheses on the influence of taxation technique on economic behaviour; to investigate the effectiveness of different methods employed in fiscal publicity; to carry out international comparisons regarding tax mentality and morality towards taxation. All these polls and surveys need much time and often involve large sums of money; therefore it will be some time before more general theorems, sufficiently confirmed by empirical methods so that they can be conscientiously established, can be formulated on the effects of taxation, expenditure and fiscal publicity. But at least a beginning has been made, which undoubtedly has been worthwhile.

To start research on the behaviour of the broad masses by undertaking as comprehensive a survey as possible was a method which at once suggested itself along the lines of the technique applied in census-taking. Quite a different method had to be used from the outset when it came to the investigation of the influence of public opinion on legislation and on the budget. In this case it was necessary to ascertain the views and attitudes of comparatively few, very busy people occupying high positions. We decided to make a start in this field with a single special study intended to test one specific hypothesis; using the 'Julius-Tower' problem as our test case we proposed to examine the alleged insufficient suitability of the 'fiscal-policy' theory for everyday practice in politics. Furthermore, we confined our investigation to the formation of parliamentary opinion. Special interviewers from the Allensbach Institute for Demoscopy interrogated 67 members of the German Bundestag, representing all parties, ages and political backgrounds of the assembly, and also all members (27 delegates) of the Finance Committee. The object of this inquiry was to ascertain the reaction of delegates to modern budget theories and to finance and currency questions; in particular, we wished to ascertain to what degree the delegates were aware of the interrelations and mutual influences between finance and currency policies, inescapable prerequisites for any considered action in the sense of a 'fiscal policy'. It thus came to light that such action was impeded not only by the natural lack of economic knowledge on the part of most delegates – apart from those parliamentarians with experience in economic affairs on the Finance Committee – but also, and above all, by the specific dynamics and complexity of parliamentary opinion formation in general.[59]

In the autumn of 1959, our Research Institute (in conjunction with the Allensbach Institute for Demoscopy) undertook its most comprehensive survey up to now on the subject of people's behaviour in dealing with money. With a comprehensive programme based on preparatory studies on the consciousness of the value of money, interviewers questioned all adult members of a representative cross-section of 1050 West German households – altogether 2435 adults – about their personal income expectations, their consumption habits, their attitude towards cash and book money, towards saving and expenditure, husbanding and planning, hoarding and hire purchase; also about their paying habits, their regular amount of ready cash, their opinion on the acquisition and holding of securities, on investment of money and on property and wealth in general. Once again, as in the case of the first-mentioned inquiry, this was a general survey of the basic facts – but in this case a survey of extraordinary complexity. Inquiries of these dimensions entail unusual difficulties, which we were only able to overcome thanks to the years of experience of the Allensbach Institute staff. Even the methods applied in such inquiries present problems of their own; on the other hand, methodological experience is of great heuristic value on account of the many facets of the subject under survey in which often quite unexpectedly detached sets of facts are shown to be related to or influenced by each other or sometimes even to be identical.

The inquiry has yielded a comprehensive and complex collection of primary material on behaviour in dealing with money, the exploitation of which is not yet complete; only a few results have so far been published.[60] The fifth volume of our 'Beiträge zur Verhaltensforschung'

[Contributions to Behaviour Research][61] will include these materials in so far as they permit statements concerning essential habits in dealing with money and behaviour patterns and motives connected therewith: on the respective roles played by husband and wife in household decisions, and the more or less common will created between them in economic matters; on the origin and composition of income; on the role of the 'co-earners' in a household and the extent of economic 'integration' of means and demands; on the economic significance of the various forms of income and the analytical value of the 'income' factor; on the income pattern and the standard of living practised as distinct from the one aimed at; on thrifty, planned household economy and its results; on financial reserves, savings, acquisition of property and wealth; on the amount of ready cash; on hoarding; on long-term savings; on taking loans; on subjective liquidity and the role of expectations; on the problems of receiving income or effecting payments through bank remittances and cheques; on forms and motives of money investments; on reactions to interest rates and premiums on savings; on confidence in the value of money and appreciation of the value of money; and on education to induce saving and to impart a knowledge of economics.

The analysis of the reasons for a particular kind of behaviour shows many variations in depth: sometimes it can be made on rational considerations alone; in other cases we are compelled to penetrate into individual psychic motivation. As a rule the analysis remains in the nature of a 'sociological' explanation, using such concepts as status, role, education, environment, mentality, etc. Only in exceptional cases can we remain on purely 'economic' ground; even the income factor cannot, on closer examination, be interpreted exclusively on an economic basis if the analysis is not to be bogged down in such tautological statements as, for instance, that the higher the income, the greater the likelihood of savings from its remainder. In reality, saving is practically always actively motivated; it is true that macroeconomic statements on the 'savings function' for instance can – on the surface – manage without anything being said about motivation; but such statements are often valueless as forecasts unless it is possible to resort to a microeconomic causal analysis.[62]

With respect to many subjects of microanalysis the critic will a priori be inclined to question whether or not they are relevant to the problems of the economy as a whole: does the behaviour of the small saver, the small shareholder, or the payment habits of people with the smallest bank deposits carry any weight for the economy as a whole? But certainly they are all the more significant in a society whose middle class is increasing in size and prosperity. If, for example, we ascertain that small income holders of capital are irresponsive to changes in the rate of interest and that in this area traditional conceptions of the price function of interest rates do not apply, even indeed that rates of interest only constitute a spur to rational economic behaviour beyond a certain threshold of income, and, further, that this threshold is surprisingly high in some population groups – then, so it seems to us, it is well worthwhile to work out an 'interest theory of the common man', and to determine the threshold at which it ceases to apply. This would enable us to follow the transition to a more rational 'interest consciousness' with greater precision; after all, it does seem quite probable that in this way we might obtain suggestive impulses even for the traditional interest theory.[63]

It is indeed true to say that even the analysis of rational behaviour derives particular benefit from the methods of microeconomic, psychologically informed behaviour research. Wherever in the real economic world we find human behaviour conforming to economic rationality, this is usually due to institutional training or produced by certain educational influences. In order to forecast which people will behave rationally in a particular way, and under what circumstances, it is necessary to refer to the results obtained by behaviour research. The main problem of economic theory – which is to discover in what fields the hypothesis of rational behaviour approximates reality – can be solved by our empirical research methods just as well as the problem of economic policy, which is to discover when and to what extent economic rationality can be attained or improved by taking particular measures,[64] and the problem of forecasting economic developments.

As a result of our survey described above, the analysis of behaviour in dealing with money in private households has made considerable progress. More specific research programmes are now being planned. We have already mentioned as examples the subjects 'Economic behaviour under inflation' and 'The thresholds of sensivity to interest rates'. With regard to the interest problem there exists a first, unpublished special study on the possibilities and limits of property formation by employees; this study was commissioned by, and carried out on behalf of, the Federal Ministry for Labour and Social Order in 1961. It was an investigation of the effectiveness of certain measures of industrial firms to assist employees in their formation of property. Among those who were the object of this policy a distinction was drawn between those on the one hand who are no longer in need of assistance for their property formation, and those who cannot yet be reached, as well as, on the other hand, the middle group which is both in need and worthy of assistance, i.e. at least potentially willing to save.

It must be admitted that the savings goals of this middle group of employees are to a large extent still within the area of consumer durables, which undeniably occupies first place in the ascending ladder of the various types of property formation. On the other hand – if the long-term view is taken – it is certainly not meaningless (as a first step) to encourage the saving of larger sums on a long-term basis, even if the amounts saved are partially used to acquire consumer durables.[65] The assumption that better familiarity with book money, still lacking in the 'lower' half of the population, would lead to changes in saving habits, periods of saving contracts and saving goals, is among the subjects that have so far been confirmed by our research but whose final analysis had to be postponed.

If not such long-term effects, but only the immediate results of certain measures to encourage saving are at stake, first of all the actual opposition must be tackled which we must expect to encounter. Such opposition can be avoided by suitable methods or be overcome, for example, by promising a sufficiently high reward for conformity. In order to test various possible ways of encouraging saving in business we applied (among other methods) the split-ballot technique, i.e. a number of different but identically constituted groups were chosen at random for interrogation with questions varied according to a set plan. On our behalf, the Frankfurt DIVO Institute questioned two groups, each consisting of 400 employees, while our Research Institute similarly interviewed two groups, each consisting of about 100 employees. In addition, we carried out a pilot study by questioning about 40 employers in various types and sizes of industry in order to supplement our hypothesis about the presumed efficacy of various possibilities by evaluating the chances of realizing them in actual business practice.

Among other things we were able to confirm our assumption that the influence on behaviour of interest on capital depends not only on the rate of interest, but also on the amount of the interest-bearing capital and the particular kind of promised interest. Low rates of interest may possibly influence the choice of capital investment, but only above a variable threshold of property the height of which is determined by the strength of the profit motive; also by such information and habit phenomena as familiarity with accounts and banks; while a very much higher rate of interest – optimum 50 per cent – may even serve to awaken a wish to save which was at best only latently present beforehand. But here again the effectiveness of the influence of interest rates on behaviour does not depend only on the actual rates but just as much on the skill with which this stimulus is dressed up as information and adapted to the mentality of whatever group is being addressed.

The series of available reports on investigations ends for the moment with a minor pilot study carried out in a small Rhineland township by students as part of their practical work: it concerns the 'infectious' effect produced by the acquisition by neighbours of television sets. One of our colleagues took advantage of an invitation to the Survey Research Center, University of Michigan (Professor Katona), to make inquiries of his own, in part also to undertake development studies in British Honduras; and at present a comprehensive survey is being carried out under the auspices of the Association for Social Policy (Verein für Socialpolitik) on the influence of associations, chambers of industry and commerce and labour unions on the economic policy of the Federal Republic.

These few examples may suffice to describe some of the actual projects of the Cologne research workers on socio-economic behaviour; but the research aspect must certainly not obscure the part played by teaching. The main lecture course – 'Socio-economic Behaviour Research' – in Cologne has been included in the general syllabus for students of economics and sociology. It was held for the first time during the winter term of 1955–56 with one lecture per week. Since the summer of 1958 these lectures have mostly been given twice a week, alternating in courses of two and three terms. A specialized course on fiscal psychology was given once a week in a seminar, and a practical class for junior students in socio-economic behaviour research was held twice a week in 1959 and 1961. To these were added in the summer term of 1960 and the winter terms of 1960/61 and 1961/62 twice weekly seminars for more advanced students, as well as a main seminar for senior students in the winter term of 1961/62. These courses regularly turn out a staff of student assistants who work in the Research Institute and in the Central Archive for Empirical Social Research.

This in turn serves automatically to maintain contact with related disciplines, in particular with those of sociology and social psychology.[66] For three terms our researchers cooperated with psychiatrists under Professor de Boor in a colloquium on 'Psyche and Property', in the course of which new patients of the University Psychiatric Clinic were examined with a view to discovering how far the so-called 'property function' is preserved in cases where consciousness of space and time is disturbed or completely lacking, i.e. how much the patients knew or clearly remembered about their private property and also what their attitude was with regard to money and the value of money.[67]

In this connection there could also be mentioned several symposia we held with representatives of neighbouring disciplines. In 1957 there was a discussion under the auspices of the Research Agency of the *Land* of Northrhine-Westphalia (*Land* Nordrhein-Westfalen) with representatives of law and technological sciences. In 1960 a colloquium was held in Zurich with anthropologists and cultural philosophers; finally, at the meeting in October 1961 of the 'Munich Discussions' there were talks with psychologists. Some of those meetings resulted in direct contacts and stimulated our socio-economic research.[68]

The problem of consistency and change in the economically relevant behaviour of human beings, if taken seriously, requires a research programme that would absorb the working energies of generations. Out of the broad panorama of entrepreneur decisions and purchaser attitudes, of saving and property formation, of the behaviour of taxpayers and citizens, of the different influences on legislation by economic groups and single firms, we have for the present concentrated our research interest on a few specialized areas, in particular on behaviour in dealing with money in private households and on the subject of fiscal psychology as outlined above. In the field of fiscal psychology our preliminary investigations mentioned above are to be followed by a special analysis of the behaviour of the better-off independent taxpayers; as a second step to broaden our knowledge of behaviour in dealing with money, further research is planned by means of an inquiry (already begun) into the behaviour of holders of securities. If conformity and constancy of human behaviour are to be ascribed to the working of institutions and to the effect of attitudes and habits, while any change is due to rational behaviour, socio-economic mobility and the changing conditions of environment – all of which elements are to a great extent accessible to empirical research – then the hope may be justified that, in the near future, such socio-economic behaviour research will be able to contribute to a better understanding and even to the forecasting of economically relevant human behaviour.[69]

3
The Private Household

Section 3.1 is translated from Günter Schmölders, *Der Umgang mit Geld im privaten Haushalt* [in Zusammenarbeit mit G. Scherhorn und G. Schmidtchen], Berlin: Duncker & Humblot 1969 (Beiträge zur Verhaltensforschung Heft 10).

Section 3.2 ('A behavioral approach to monetary theory') was first published in Erich Streissler (ed.), *Roads to Freedom. Essays in Honour of Friedrich A. von Hayek*, London: Routledge & Kegan Paul 1969, pp. 201–43.

Section 3.3 ('Level of aspiration and consumption standard: some general findings'), written jointly with Bernd Biervert, was first published in Burkhard Strümpel (ed.), *Human Behavior in Economic Affairs: Essays in Honor of George Katona*, Amsterdam, New York, etc. 1972, pp. 213–27.

3.1 How money is managed in private households

3.1.1 The head of the house and the housewife

> When it comes to money management, then I cannot approve of the approach taken by most men of standing, who give their spouse a certain sum which they must get by on in running the home. This creates a conflict of interest; the wife is placed in the category of servants, is tempted to act out of self-interest, seeks to make savings, finds that the husband is too fond of his food, pulls a face if he invites a good friend home to dine; the husband, if he is not noble-minded, always thinks he is not dining well enough for his hard-earned money, or, if on the other hand he exercises excessive sensitivity of thought, does not dare occasionally to request a further modest

> repast, for fear of embarrassing his spouse. So give your wife . . . a sum of money appropriate to your circumstances for her expenditures! If she has spent this money, she should come to you and ask for more! If you find that too much has been spent, then ask to be shown the bills! Consider together with her where economies might be made! Do not make any secret of your financial circumstances; but also set aside a small sum for her innocent pleasures, for her toilet, for modest acts of charity, and do not ask for any account to be made for these![1]

How should we imagine the division of economic roles in the private household today, two centuries on from Knigge? In a fifth of all households, one could say that economic decisions are taken in the course of a monologue; these are the single-person households. However, 80 per cent of households are faced with a need to reconcile the wishes of several household members with one another. Of this group, we consider below only those households with a complete core of the family, i.e. that 70 per cent of homes where both partners remain together.

The main earner in each of these households was asked whether he retained his earnings for himself or whether he passed them on either entirely or to a large degree to his wife, possibly deducting a sum of money for his own personal spending; the housewife was asked whether she receives a regular amount of money to run the home. It was shown that in most families (70 per cent), the housewife managed all or nearly all the household income. Of course, this does not mean that the man might not have any influence on how the money is used; we are not talking here about the needs and desires arising in the household. However, the responses show that in most cases the man leaves 'budgeting' on the available income more or less entirely to the woman. Even the fact that in a notably large number of instances (48 per cent) the man ostensibly does not even keep back any money for his own personal spending is not surprising; in general, this probably refers only to the 'official' arrangements. It is likely that this takes no account of, for example, the worker's overtime pay, which he arranges to have paid out separately and in some circumstances conceals from his wife, and similarly it takes little account of the extent to which the man whose wife manages his whole income gradually diverts sums from the joint pot for his own personal use over the course of the income period; 'personal spending' here simply means that the man regularly retains a certain amount for himself when handing over his earnings, and that his wife knows how much this is.

To summarize, in the Federal Republic of Germany there is practically no instance of single-account budgeting where the account is managed exclusively by the *head of the house*. Rather, the most frequent instance is where the budget is indeed managed using just a single account, but the *housewife* is responsible for managing it; less frequently, one finds that the main earner retains some part of his income and therefore has a *second* account which he himself manages.

Looking for the factors which might explain these differences, one first comes across the level of income; where there is little money, it probably makes little sense to divide up this small amount across two accounts. Rather, practically everything will be spent on day-to-day living and smaller purchases, made by the wife, while the man goes about the business of earning an income: why should he give himself the additional trouble of managing his own account? In fact, this hypothesis is immediately confirmed: in households where the head of the family earns less than DM 400 net income per month, in most instances (75 per cent) there is just one account, managed by the wife, whereas in households with a monthly income of DM 1000 or more, in most cases there are two accounts: here the main earner hands over his entire earnings to the wife in only 37 per cent of households, and in 63 per cent a part of his earnings is kept back.

Admittedly, this connection in no way proves that the division of economic roles within the home is clearly, or even solely, dependent on the level of income.

As Table 3.1 shows, it appears that one's profession plays a role here. Across all income differences, it appears that independent retailers, freelance professionals and farmers are more likely to manage a part of their income themselves than are white- or blue-collar workers. This trend may be attributable to the irregular income streams experienced by these groups of professionals. However, it remains an open question as to why the percentage of men operating a second account increases with higher income across all professional groups, with the exception of blue-collar workers. This finding is, as will be shown, the key to explaining the phenomenon: blue-collar worker households differ from all others mainly because they are less often able to build up financial assets.[2]

Looking around further for the factors contributing to this noticeable finding, the conjecture is rapidly confirmed that in addition to the economic situation of the households, a particular type of economic behaviour on the part of the household is decisive in all instances: two-account households are consistently somewhat smaller than the single-account households, but on average they dispose of somewhat greater

Table 3.1 Money management by professional and income groups[a]

	Blue-collar worker households		*White-collar worker and civil servant households*		*Households of independents working in retail and commerce, and freelance professionals*		*Farming households*	
	Net monthly income of the main earner							
	Below DM 500 (%)	*DM 500 and over (%)*	*Below DM 600 (%)*	*DM 600 and over (%)*	*Below DM 600 (%)*	*DM 600 and over (%)*	*Below DM 500 (%)*	*DM 500 and over (%)*
Type A: Main earner gives all or most of earnings to the wife	78	80	78	64	53	39	53	30
Type B: Wife only receives a part of earnings	18	17	18	30	44	46	28	30
Type C: Wife receives money to manage on at very irregular intervals	4	3	4	6	3	15	19	40
Total	100	100	100	100	100	100	100	100

[a] Only households with a complete core of the family (two partners).

financial means. In these households, the financial means are contributed by more than one person in almost every instance, and the financial integration of these households is consistently stronger, i.e. the income-earners in two-account households give on average a bigger share of their earnings to the joint household account. For these reasons the freely disposable income in two-account households, after taking out the regular outgoings, is somewhat larger than in the households with just one account; and as this freely disposable income is used for purchases or to build up a reserve of cash, the success of two-account households in saving money (expressed *inter alia* in the amount of money kept in various accounts) is consistently larger.

All this points to the fact that it is less the level of the earnings available to the household which causes the head of the house to manage a part of his income himself, but rather the fact that some part of these earnings remains unspent (as a result of joint budgeting) and, over time, builds up into a significant, if still modest, cash reserve. In fact, the proportion of two-account households in *all* professional groups increases with the increasing amount of the cash sums which have been accumulated in the various accounts (Table 3.2). Since this finding applies across the board, i.e. including for blue-collar worker households, we are inclined to adduce it to explain the facts of the situation; but how should it be interpreted? Is it simply reflecting the fact that in general a specific account is used to build up financial assets, and that if there is any need to do so it is the head of the house and not the housewife who is entitled to draw on that account? An argument against that is the fact that even 63 per cent of the single-account households operate more than one

Table 3.2 Financial assets[a] and financial management[b]

	Blue-collar worker households (%)	*White-collar worker and civil servant households (%)*	*Households of independent professionals and farmers (%)*
Households with assets of:			
– Under DM 500			
One account	84	80	54
Two accounts	16	20	46
	100	100	100
– DM 500–DM 2000			
One account	79	83	47
Two accounts	21	17	53
	100	100	100
– Over DM 2000			
One account	56	52	28
Two accounts	44	48	72
	100	100	100

[a] Total of all amounts which the household has in its accounts.
[b] Only households with a complete core of the family.

bank account; and for these bank accounts, too, it is mostly the man who has the drawing rights.

Or is it the case that the man typically tends to operate a second account in those situations where larger surpluses are built up, and where sums accumulate which make it seem worth the trouble to him? The circumstances revealed by our question were as follows: in the single-account households, the main earner (in most instances synonymous with the head of the house) gives his earnings entirely or practically entirely to his wife, but in two-account households he only hands over a part of his income as the family budget, retaining a significant share to be managed by himself. Two points are important in this: firstly, he does not keep back this part of his income wholly for himself, to be used for his personal needs – although no doubt this situation does also occur – but in most cases he uses it to build up joint assets. Secondly, this division of income into two accounts generally takes place right *at the start of the financial period* (week, month); however, this is then an expression of a certain kind of economic behaviour on the part of the core of the household which is important for the matter under discussion.

In two-account households, the man and the woman apparently decide at the start of the financial period, i.e. immediately after the income is received and before they start to use that income, how much they will then spend and how much is to be saved. To that extent, the two-account household serves as an indicator for the pattern of behaviour of 'sacrificial saving',[3] even if a very incomplete one. It is notable that this pattern of behaviour occurs more frequently with higher social status and/or with a better financial situation for the household, and furthermore that it cannot be equated in any way with financial disintegration, but instead frequently even equates with a shared focusing of all efforts; consequently, it can be described as a 'typical' pattern of behaviour for financially 'strong' households (across all social strata).

We use the term economically 'strong' to describe those households where there is a relatively high income for the head of the house or, more accurately, a relatively large joint household budget account (which can indeed also be fed from the incomes of several earners), together with a relatively low level of burden from regular expenditures for day-to-day living, so that noteworthy surpluses can be realized. Such households can be found in all social classes, even if they occur most frequently in the upper classes. However, the hypothesis that such surpluses might arise practically automatically, without any action on the part of the household, can be dismissed immediately: households whose income situation is so extremely favourable that even with the most extravagant lifestyle there would still be a large proportion of income left over in any event are practically not to be found at all in a representative sample of 1050 households. For the households we examined, it was rather the case that even where their financial circumstances were relatively favourable, they only ended up with significant cash surpluses if they went about it in a deliberate fashion, i.e. if their behaviour was characterized by a certain minimum degree of thrift and discipline; this goal-oriented and disciplined behaviour then admittedly helps the so-called 'strong' household in economic terms to develop even larger cash reserves since their financial situation is in any case more favourable.

In households enjoying an advantageous financial situation and whose economic behaviour is oriented to generating surpluses, there is therefore frequently a division of roles between the man and wife under which the man is responsible for managing the surpluses while the woman continues to take care of day-to-day budgeting. Not much changes in this gender-based division of roles in the household if the woman is similarly earning.[4]

In so far as day-to-day budgeting calls for money to be expended, this is normally handled by way of a cash payment; one can therefore say that the economic role of the woman consists in *cash budget management*, not only in the one-account households but also in those households where two accounts are operated. The man only intervenes in money management where it involves managing significant surpluses of money which are to be accumulated over the short or long term; but this accumulation generally takes place in bank accounts, i.e. not physically as cash.

In fact, 37 per cent of one-account households have no bank account at all, compared with only 19 per cent of households with two accounts; 40 per cent of one-account households but only 29 per cent of two-account households have only savings books or savings accounts; and the proportion of households which have giro accounts as well as savings accounts is only 23 per cent for one-account households, but over twice that figure for two-account households (52 per cent). Two-account households not only have more bank accounts overall, but they also have bigger amounts in those accounts, they are increasingly involved in cashless payment transactions, they more frequently have giro accounts, and they more frequently make payment by bank transfer or cheque.

Involvement in cashless payment transactions, just like the management of surpluses and of assets, is generally the man's responsibility: his role therefore includes *managing deposit money*. More complicated monetary transactions, especially if they are associated with written work and involve larger sums, appear almost entirely to be the man's sole responsibility; frequently, they are indeed better equipped than the housewife to handle such expenditures, due to their job. Strangely, the situation is the same among the middle and upper classes; it seems that even here, neither the parental home nor school have so far succeeded in familiarizing women with how to manage deposit money.

If the head of the house manages a part of his income himself, this is therefore in no way always a sign that the household is poorly integrated financially; the man takes on a quite specific social duty in operating the second account. He manages the surpluses generated in the household, which are generally held in non-cash form. Where the household makes cashless payment transactions, the man is also responsible for handling the non-cash payments – this is generally also true for the one-account households. Even where the housewife manages the family's entire budget, the man is more familiar with cashless payment methods than she is. His greater familiarity with deposit money and cashless payment transactions is, however, not the actual reason why the man operates his own account in some households. It is certainly true that if he were not more familiar with deposit money than his wife, he would not take from her the responsibility for managing the deposit money accounts. But the fact that he is more knowledgeable in monetary matters than she is often enough the result of the fact that to some extent management of the deposit money account is a role traditionally assigned to him; he is the head of the family and the head of the house, the family bears his name, he represents the household to the outside world, he earns the larger part of the money with which the household manages its budget, and he looks after the assets which the household accrues. Consequently even if his education and his professional activity have not necessarily trained him more in how to manage deposit money, he has a better chance than his wife of exercising authority in this area; the management of deposit money is part of his 'role' in managing the household budget.

3.1.2 Joint preferences

In *Wilhelm Meister*, Goethe writes in the following terms about the 'natural division of labour' between man and wife:

> Where the husband torments himself with external circumstances, where he has to procure and protect possessions and property, where he is even called upon to participate in the managing of the state, dependent in all regards on circumstances and, I might say, governing

> nothing over which he believes he exercises control . . . the sensible wife exercises her rule effectively over the domestic sphere and makes all activities and all satisfactions possible for the family. . . . As a wife achieves this mastery within the home, through this alone she makes the husband whom she loves the master of his position; through her attentiveness to detail she acquires full knowledge of their situation, and in her actions she knows how to exploit that knowledge. She is thus not dependent on anyone, and she obtains for her husband true independence, which is domestic and relates to the home; the things he possesses he sees secured, the things he acquires well-used, and thus he can follow his disposition in devoting himself to major matters and, if fortunate, can be for the state what his wife is so admirably for the private household.

Corresponding to this notion of 'woman's rule in the home' is a division of labour which also finds expression in the manner in which joint wishes are established in the private household. The dividing-up of domestic budgeting and competences naturally also impacts on how decisions on needs and purchases are made. For each of the partners running the household, there is an area where in case of doubt their word holds greater sway than that of the other; this can be attributed not only to the delimitation of interests over domestic budgeting in that particular household, but equally to the more general 'role expectations' which society has of men and women.

The areas reserved for the woman are, above all, decisions about expenditures on day-to-day living; by contrast, the wife generally voluntarily defers to her husband not only over decisions regarding how to invest their joint assets, but also on certain purchases, for example a car. The actual impetus towards buying a new car appears in most instances to come from the man, whereas the wife will often introduce a retarding force – not because she would have anything against a new car per se, but because she has a different order of preferences from him, as suggested by her 'role'. Her priorities ascribe greater importance to furnishing the home, to caring for the material well-being of any children, etc.[5] Even when deciding which model to buy, it seems that where there is a difference of opinion it is the man's view which prevails, i.e. in so far as agreement has not already been reached well before the decision over the need for the car (which is often the case anyway).[6]

In fact, with all decisions which are not wholly unimportant or which fall entirely within the area of responsibility of one or other of the partners, experience generally shows that these decisions are taken jointly – either because there is agreement right from the start, or because agreement is reached without conflict in the course of the joint deliberations.[7] Wolgast found that younger couples take decisions together more frequently than older couples;[8] this might be attributable to generational differences, and thus to a cultural change, but also to the fact that the shared nature of planning and actions in households which are still in the early stages of living together is of greater importance than in longer-established households. The greatest number of plans for major purchases are found in households with professionally and socially aspirational younger members of the middle classes;[9] looking at these households, it has been found that this is where the intensity of joint planning and decision-making is greatest.[10]

From this, one can hypothesize that the joint nature of financial decisions is a result of economic necessity, which always exerts an influence where the available means are not sufficient to satisfy all the pressing needs. The following finding supports this hypothesis: the better-placed the household in financial terms, the bigger the sums which the members of the core of the family have at their disposal without needing to reach an agreement with the partner.[11]

Our study makes it possible to demonstrate agreement and divergence in the economic behaviour of the head of the house and the housewife, using a series of examples. Let us firstly consider the question of thrift when it comes to smaller expenditures, using an indirect test. Both partners were independently asked four questions on this topic. Later analysis revealed the extent to which the answers agreed or diverged, and the results were interesting in three respects. Firstly, considerable agreement could be observed over the principle of being extremely careful over small, and possibly attractive, opportunities involving the spending of money: in 65 per cent of households with a complete core of the family, it appears that both partners are very or relatively thrift-oriented, while in 12 per cent of households neither partner appears particularly thrift-oriented; in the remaining 23 per cent, the principles regarding thriftiness are divergent. Doubtless here something which goes beyond the individual is at work – something which unites the partners managing the domestic budget in 'thriftiness in small things': the conditions imposed by the present macroeconomic situation in Germany, reflecting precisely the degree of economic flexibility currently being experienced by households.

In a tightly constrained economic position, the head of the house and the housewife feel necessarily compelled to follow clear principles over thriftiness. This is the second finding. While households where the main earner brings home DM 600 or more a month show only a 49 per cent level of agreement between partners regarding strict principles of thrift, in less well-off households (main earner income less than DM 600) the partners are both very or relatively thrifty in 72 per cent of cases; furthermore, households where both partners claim not to be especially thrifty occur more infrequently among the lower income levels (8 per cent) than in the higher income levels (21 per cent).

The third finding is that not only does managing the household budget when it comes to everyday financial matters generally become somewhat more relaxed and generous as income increases, but attitudes with regard to thrift can sometimes deviate markedly between husband and wife: the incidence of the husband being less thrifty than the wife when it comes to smaller purchases is evident in only 10 per cent of cases among lower-income groups, whereas the figure is 20 per cent in higher-income groups. Having different views over finance costs money; it only occurs where such differences can also be afforded in financial terms. Accordingly, one might make the generalization that higher income makes it possible to have greater individual differentiation in the financial lifestyle of a household. The husband exploits this possibility noticeably more frequently than the wife, who is after all responsible for day-to-day budgeting; even where the income situation is more favourable, she is not so easily seduced as the man into adopting more generous principles over budget management.[12]

The extensive match between marriage partners in their actual behaviour and in their judgements of one another[13] demonstrates very clearly that they cannot develop patterns of behaviour independent of the other within the framework of what is generally the very close economic unit of the household, and thus no separate way of thinking when it comes to money about which the other partner is in ignorance. The limited economic room for manoeuvre in which every financial decision, every change in monetary habits almost automatically includes the partner too, necessarily leads to ongoing agreement and coordination over the household budget, through the constantly arising points of contact and incidences of conflict.

Public opinion research has revealed how frequently in private households discussions are held about money and purchases, about consumer desires and plans. These discussions often appear at first glance to be fruitless, because they are often simply unrealistic, because the plans under discussion are not ultimately carried through – in other words, the discussions are staged all too often in the vacuum of non-committal argument or even conclude with the painful realization that one cannot afford this or that, since one's own options are all too limited.

However lacking in success such disputes may be, judging by the facts, and however apparently laborious they may be in their endless repetition, they do however serve a meaningful purpose: coordinating points of view and pulling together the formation of economic desires in the household. That there really is such a process of integration, that agreement on key issues relating to managing the household budget does not exist from the outset but instead needs to be brought about through a process of mutual influence, is confirmed by the fact that the agreement is all the greater (or, more precisely, is encountered all the more frequently) as the age of the partners increases and, as one may assume, as the frequency with which they have consequently discussed issues relating to money increases.[14]

Apart from this, and independently of the process of coordination within a family, the principles of thrift become more pronounced with increasing age. As one gets older, there are societal and psychological changes in circumstances which favour saving; the tendency to conspicuous consumption and, for example, also the subjective compulsion to follow trends without fail, decline. The diminishing energy devoted purely to self as age increases probably also leads to a greater appreciation of the worth of savings – to say nothing of motives to do with pension provision, which are simply not there in the younger person and which, for psychological reasons, are very difficult to instil.

At the same time, attitudes to spending money on the part of both partners – and the subjective abilities of being able to budget money – appear to converge with increasing age. Interviewees were asked the question: 'What would you say about yourself: are you good at managing money and able to budget accurately, or are you somewhat lavish when it comes to spending money?' In the youngest group of those interviewed (head of household under 30), partners had similar views in just over one-third of cases; in the oldest group (head of household over 60), nearly two-thirds of partners were in full agreement regarding their approach to money management. Even allowing for the influence of income level on the results, this finding remains valid.

However, it would be incorrect to assume that it applies to all maxims relating to budgeting: we are aware of a series of principles where there is *no* increase in frequency of agreement between partners with increasing age. But because the number of people who agree on these principles is similarly very high, one might reasonably hypothesize that this is looking at mutually shared opinions which were either already in place prior to marriage or which were established relatively quickly once the particular family unit came into being. Here are two examples in support of this.

Interviewees were asked: 'How do you generally go about making a more major purchase? Do you generally calculate precisely in advance what you can afford to buy, or do you not do the calculations first but take the approach that when you see a bargain, you will just buy it then and there?'

This question doubtless records an attitude which relates not to thrift, unlike those considered earlier, but to the use of calculation: the difference between these two dimensions is considered in detail in section 3.1.4 below. Here we confine ourselves to the observation that the partners are in agreement in most (60 per cent) of the households with a complete core of the family, and here too congruence of attitude is recorded more frequently in the lower-income groups (67 per cent in households with main earner income under DM 400) than in higher-income groups (46 per cent where income is over DM 800).

It is, however, interesting that here there is no convergence of views between partners in a household over time. Households where the head of the house is under 30 show 63 per cent agreement between partners; among those 60 or older, the figure is only 54 per cent (and thus not higher even allowing for statistical inaccuracy).

The same picture emerges when looking at attitudes to use of credit. In almost two-thirds (65 per cent) of households with a complete core of the family, both partners are unanimously agreed that it is better not to borrow, even when experiencing financial hardship, but to cut back on spending instead. Here too the rule can be observed, even if less noticeably so than over thrift with modest expenditures, that with high socio-economic status the economic behaviour of the head of the house and the housewife is more likely to exhibit divergent tendencies than where circumstances are more straightened. But as with the question of use of calculation, here again there is no demonstrable correlation with age. Agreement over the disinclination to borrow is therefore similarly not 'rehearsed' over many years, but is already in place when the household is first established: what we are looking at here is clearly a virtue with regard to domestic budgeting which is not learned from one's marriage partner; on the other hand, the absence of this virtue does not have a noticeable effect providing that the other partner exhibits it: economic vices, or attitudes and patterns of behaviour by one partner in managing the household budget which are not conducive to good budget management frequently appear to be balanced out by the other partner, who is then all the more thrift-minded and disciplined.

As a concrete case in point to test this theory, one can take the attitude to taking out loans in terms of its importance for the actual level of indebtedness of the household. We make a comparison between three groups: firstly, married partners who share the belief that it is preferable to impose unpleasant restrictions on oneself rather than to get into debt; secondly, households where one partner is inclined to take out loans, whereas the other is not; and thirdly, households where both partners unanimously concur that they would rather get into debt than impose severe restrictions on their spending. In fact, we find that especially in the higher income groups (above DM 600 monthly net income), households get into debt through HP contracts, mortgages, private loans, etc. far more readily than households in the lower income group (highest income group 46 per cent; upper income groups 36 per cent; lower income group 28 per cent); the lower income group also uses credit arrangements with local stores far less – with only 2 per cent purchasing 'on tick', as opposed to 6 per cent in the upper income groups and 25 per cent in the highest income group. Here too, the hypothesis is confirmed that sufficient financial room for manoeuvre is one of the preconditions for behaviour to be affected by individual attitudes on how money is used.

The attitudes of both partners within a household to key questions of budget management nevertheless demonstrate considerable congruence, as we have been able to demonstrate. At least in respect of the issues of thrift, borrowing, planning and allocation of resources, the majority of partners are in agreement; at their heart, most households are endeavouring to manage their finances with thrift and in a planned fashion, with discipline and making use of calculation to assist in budgeting. Where there are divergences of opinions and principles, as a rule the more stringent view prevails; this should therefore not significantly reduce the ability to view the household in economic terms as a single entity. It is only as wealth increases that these strict principles regarding budget management give way to increasing freedom of manoeuvre and liberality in the individual lifestyles of the partners in a household.

3.1.3 Income as a characteristic and a determining cause of behaviour in households

In socio-economic analyses, income is used with two meanings, as a characteristic and as an independent variable, in *cross-sectional* and *longitudinal* studies. The simplest example of a longitudinal analysis is the time sequence, a series of data respectively referenced to the same unit of aggregation, e.g. expenditure on food for all German households from 1950 to 1960. These data vary only in the dimension of time, but not between persons in the dimension of the different economic subjects of the individual households with regard to one another. Whereas the time sequence shows how the behaviour of a unit of aggregation changes over the course of a given period, the cross-sectional study provides a snapshot and thus the opportunity to compare the behaviour of the different economic subjects (or groups) comprising the unit at the same point in time. If one combines both principles, then one obtains a more complicated form of longitudinal study than the time sequence, namely a series of cross-sections using the same unit of aggregation.

Let us first consider income in its property as a characteristic of households as used in cross-sectional analyses, in which characteristic it is chiefly used in the present study. Serving this function, it can assist with two kinds of statement, which are clearly differentiated from one another: the factor income can be used both to *describe* the economic status of a household and to *explain* its economic behaviour.

The descriptive function of the factor income ('How much money do the households have?') is naturally only extremely incompletely satisfied if taking the *income of the main earner* as the measure; it gives a thoroughly inaccurate picture of the financial strength of half of all households. But on the other hand, the information which we obtain from the *household's income* about the financial strength of the household is only accurate in a very formal sense: it indicates only how much money is at the disposal of all members of the household taken together. As soon as we wish to penetrate slightly deeper into the structure and behaviour of the household, this information is no longer adequate for our needs.

For a more accurate description of the financial situation of households, it is essential to find out how the totality of the funds flowing into that household are distributed across the integrated core household on the one hand and the associated non-core households on the other.

These non-core households should not be viewed in any way simply as independent households; their particular nature consists precisely in the fact that some of their expenses are met from the main household budget. An adult non-core family member who retains DM 300 of his income for himself is naturally in a completely different economic situation from an independent one-person household with an income of DM 300. The latter has to meet all his needs from this income, whereas the former must only meet those expenses not covered by the main household budget, i.e. generally only irregular and non-normal needs; the funds retained and managed by our non-core family member can thus be viewed as practically freely disposable income.

Consequently the income managed by an adult non-core family member is not comparable to the total income of the core household or of other more strongly integrated households, but only to their disposable income (understanding this to mean the freely disposable income after deduction of normal recurring consumer spending). Only in this way can the non-core family member household be viewed as an independent consumer unit and compared with other units.

In other instances, it is not possible to separate off the non-core adult family member from his relationship with the core household; instead the analysis looks separately at 'households with non-core family members' and 'households without non-core family members', or ignores the non-core family members and considers only the behaviour of the core household.

For the description of the financial situation of a household, group or different groups of households, knowledge of household income is therefore purely a kind of 'raw material'; the households in a group are more precisely described using information such as average household budget, average size of household, proportion of households with non-core adult family members, average level of the funds managed by the non-core family members themselves, etc.

The aim of this 'descriptive function' of income is to characterize the financial position of households which are selected and broken down on the basis of completely different characteristics; perhaps on the basis of the profession of the head of the family or by size of household, number of children, etc. Naturally, one can also adduce main earner income in describing a group of households defined in this way; but the variable provides information less about the financial situation than about the social status of the household.[15]

By contrast, if looking to use income not so much as a descriptive variable but as an explanatory variable in analysing a pattern of behaviour, then the households will be broken down not by number of members or children, but precisely by income, in order to see what kind of correlation exists between income and behaviour. In each case, the breakdown criterion selected is the range of income which demonstrates or promises the strongest correlation with the pattern of behaviour, attitude or behavioural outcome (e.g. success in saving, assets) to be analysed. If a behaviour is dependent on income as an economic variable, i.e. simply on the amount of available funds, then depending on the set of problems being studied the obvious criterion to use for the breakdown is either the household budget or disposable income; using household income is only recommended where the disposable income of the individual household members, and particularly that of non-core family members, was not recorded yet the observed behaviour is most strongly determined by this factor. In such an instance, household income is the only variable which includes these amounts both for the core household and for the associated non-core households.[16]

However, there are only very few economically relevant sets of circumstances which can be explained using income level as the sole determining cause; in most cases, income is only a necessary – but inadequate – condition for a concrete behaviour, which for its part can even become an independent variable for a certain income level. This applies, for instance, if a standard of living being aspired to, a planned level of demand, leads to more intensive activity, to overtime or to paid employment for additional members of the household.

Income only becomes an adequate condition to the extent that it symbolizes the social status, values and relationships which exert a concrete influence on behaviour. Consequently, income can only be viewed as a variable determining behaviour if the behaviour arises from membership of a group positioned 'higher' or 'lower' socially and economically, i.e. if it corresponds with the socio-economic status.

The characteristic of income derives its operational suitability for explaining patterns of behaviour from the fact that social status and social prestige in an earnings- and consumption-oriented society largely correspond with income level and, to an extent, result from it. The form of income which best reflects and symbolizes the status of the earner in the social stratification in an earnings- and consumption-oriented society is clearly personal income, and in a household the income of the person who heads up that household and represents it to the outside world, who determines the social status of the other members of the household, i.e. the income of the head of the household or the main income earner.[17]

The statements which we can make using the material from our study are cross-sectional statements – for example, regarding the fact that as the income of the head of the household increases, the frequency of the presence of fellow earners diminishes. Such statements relate to relations between groups – in this instance, between groups of lower and higher income; they only become longitudinal statements if the independent variable (here income) varies over time. This is never intended in cross-sectional statements, even if terms such as 'growing' or 'increasing' are used; a sentence which is transposed from a cross-sectional into a longitudinal one changes its meaning.

Formulated as a cross-sectional statement, our example would be saying that in groups with higher income, one finds fewer fellow earners per household than in groups with lower income. As a longitudinal statement, it would mean that in a group whose average income is increasing, the average number of fellow earners is reducing, i.e. that with increasing national income, one would suspect a tendency towards single-earner households.

It is illuminating that this hypothesis can only be correct if the longitudinal changes are brought about by the same factors as the cross-sectional differences. In our example, the cross-section is influenced by the level of income, career structure and also by the age of the head of the household. In the longitudinal view, however, it can be the case that the structure of all three variables (the quantitative relations between the income, career and age groups) remains the same and nevertheless the trend towards the single-earner household becomes established, but for completely different reasons: e.g. because the age of getting married becomes lower, or because the period of initial professional training is extended for all careers. The statement is then only apparently saying the same thing; its sense and meaning have altered fundamentally through the transposition from cross-sectional to longitudinal statement.

Even the individual independent variable changes when transposed from the cross-sectional to the longitudinal. It is a different thing if one compares the income of two different groups at the same time or the income of the same group at different times. It is important to bear this qualitative difference in mind in applying income as an independent variable in longitudinal statements.

In roughly one in every four households (26 per cent) in the Federal Republic of Germany, the head of the household or the housewife took the view at the turn of the year 1959–60 that their income would increase in the next 12 months. Retrospectively, looking at the past five years, heads of household or housewives in nearly one-third of households (32 per cent) reported that they were significantly better off than five years ago. Just over a third (37 per cent) said they were somewhat better off, and the last group (31 per cent) reported that they were no better off financially over the five years, and in some cases were worse off.

At first glance, it appears that income expectations are not in the least dependent on the level of income to which they relate. Among interviewees with income of under DM 300 net, 35 per cent expect their income will rise; of those earning DM 800 or more, only 29 per cent are expecting a rise. It seems that the higher a person's actual current level of income, the more pessimistic he is likely to be about rises in income. On closer inspection, however, one sees that income level exercises no influence, or even a negative influence, on income expectations only in the lowest age group (under 30). For people in middle age and older, positive income expectations can be found more commonly in the higher income levels than in the lower ones. One cannot therefore generalize that people in the upper ranges of the income scale have the most optimistic opinions regarding their future income trend; it is only when they have become somewhat older that this connection is made.

However, it has nothing to do with success or experience. The experience of a sustained improvement in the economic situation in the past generates positive income expectations in all age groups, even among the youngest group, in which – viewed overall – the expectations of pay rises in the short term are in any case more than twice as frequent as for those in middle age, and over five times as frequent as for the oldest age group.

Two factors thus seem to be the main ones influencing the trend in income expectations. Firstly, people clearly learn from their last *experiences* of success or disappointment and orient their expectations, in terms of a level of demand, accordingly. Positive income expectations reveal an attitude that the individual has not yet achieved the highest possible income level, or at least not yet exhausted all possibilities of promotion; this opinion may be partly based on possibly groundless optimism, but in many cases (as Table 3.3 shows) it is based on experience, both with regard to one's own abilities and equally with regard to what society/the company is willing to pay. The more numerous these experiences, the more realistic the level of demand becomes.

The second factor is age, which is not least an indicator of a mental attitude which we can describe using the terms 'optimism' and 'pessimism' – the former being predominant among younger interviewees, the latter among older interviewees (Table 3.4).

If wanting to study the influence of income expectations on how money is handled, one must therefore continually recall that those people who view their income trend optimistically largely tend to be young people, who in the process of normal career development improve their income situation or who are socially upwardly mobile (social climbers), in a wide variety of careers. Thus we find that this group, which hopes its income will rise in the next 12 months, behaves differently from the 'stagnating income' group when it comes to handling money – not just because they have positive income expectations,

Table 3.3 Influence of income and age on expectations of income

	Interviewees who believe that in the next 12 months their income will:			
	Rise (%)	*Stay the same (%)*	*Fall (%)*	*All[a] (%)*
Interviewees under 30				
Income under DM 500	56	33	2	100
DM 500 and above	47	40	4	100
All	52	35	2	100
Interviewees 30–59				
Income under DM 500	18	65	7	100
DM 500 and above	28	58	4	100
All	21	62	5	100
Interviewees over 59				
Income under DM 500	8	78	6	100
DM 500 and above	23	67	4	100
All	10	75	6	100

[a] The total of the individual percentages is less than 100% because the category 'No answer' has been omitted to make it easier to read the table.

Table 3.4 Influence of positive income experiences on income expectations

Question: 'Thinking about the past 5 years (i.e. since 1954), would you say that you are economically better off or slightly better off now than then, or are you worse off now?'	*Interviewees who believe that in the next 12 months their income will:*				
	Rise (%)	*Stay the same (%)*	*Fall (%)*	*No response (%)*	*Total (%)*
Interviewees under 30					
Considerably better	64	28	2	6	100
Slightly better	49	37	3	11	100
Not better	27	51	3	19	100
All	52	36	2	10	100
Interviewees 30–59					
Considerably better	29	58	4	9	100
Slightly better	19	64	4	11	100
Not better	15	60	10	15	
All	21	62	6	11	100
Interviewees over 59					
Considerably better	28	67	2	3	100
Slightly better	6	78	8	8	100
Not better	7	76	6	11	
All	10	75	6	9	100

but also because of their social situation. Setting up home and consumption, as a means of further asserting status, inevitably lead to a pattern of economic behaviour which, while it is highly compatible with positive expectations on income, is not necessarily characteristic of it.

This may also be the reason why, for example, in the work of G. Katona (who has similarly investigated these correlations) the interdependence between positive income expectation and negative saving, which is shown as a direct connection, perhaps comes across in a more pointed manner[18] than might be expected on the basis of the mere stimulus of positive expectations on income. A check on this reveals that the connection shown in Katona and interpreted as having general validity is accurate only for quite specific age and income groups, i.e. generally for younger people, regardless of how much money they earn (Table 3.5). Older people with positive expectations on income exploit the possibility of diverting money away from saving only if they are on a low level of income.

This is shown particularly clearly in the degree to which HP contracts are concluded: the expectation that income will rise does not generally favour increased diversion of money away from saving, but only in those instances where the household is living with the tension created by numerous unfulfilled demands, which appears to be the case with young people in general and largely regardless of income, whereas with older people this holds true only for those in straightened economic circumstances; the positive expectation on income therefore also requires a 'capacity for satisfaction' which is under strain from high lifestyle expectations in order to trigger the effect observed by Katona and taken to be universally applicable.

3.1.4 Thrift

In economic theory, the complex processes which lead to the building-up of savings on the one hand, and to thrifty and rational purchasing behaviour on the other, are in most cases only inadequately differentiated; no distinction is even made between thrift and the action of saving, i.e. between attitude and behaviour in the creation of 'savings capital', between 'the desire to save and the ability to save', between 'sacrificial saving' and 'surplus saving', to name only some of the most important operational concepts in empirical research into savings.

This is all the more noticeable in that classical and neo-classical economics have been wholly aware of the set of problems which can be identified in human patterns of behaviour in precisely this area.

Table 3.5 Income expectation and levels of debt

Overview of household debts and liabilities	*Households where the head of the home is in the following age-group:*			
	Up to 44		*45 and above*	
	Households which assume their income in the next 12 months will:			
	Rise (%)	*Stay the same (%)*	*Rise (%)*	*Stay the same (%)*
Households with net monthly income of main earner DM 300–699 [a]				
HP contract	37	25	(31)	21
Savings bank or bank loan	8	7	(13)	7
Mortgages, land charges, building loans	8	6	(11)	6
Private loans	12	6	(8)	5
Store credit	1	1	(2)	4
Company loan	8	3	(3)	1
No debts/liabilities, or cannot be ascertained	54	66	(61)	70
Total [b]	128	114	(129)	114
Households with net monthly income of main earner DM 700 and above				
HP contract	(33)	(21)	(3)	(8)
Savings bank or bank loan	(30)	(8)	(10)	(2)
Mortgages, land charges, building loans	(17)	(8)	(5)	(10)
Private loans	(3)	(3)	(8)	(4)
Store credit	(13)	(2)	x	(4)
Company loan	(10)	(3)	(3)	x
No debts/liabilities, or cannot be ascertained	(37)	(71)	(82)	(86)
Total [b]	(143)	(116)	(111)	(114)

[a] Pre-sorting using these income groups was chosen to eliminate the 'income' factor as completely as possible. Roughly the same proportion of households with main earner income in the range DM 300–699 consistently expect increases in income, whether their income is closer to the DM 300 or DM 699 limit.
[b] Totals are over 100% due to multiple responses.

A. Marshall described the range of variation in this behaviour some 80 years ago, with barely concealed amazement:

> Cases are not rare of men who alternate between earning two or three pounds a week and being reduced to the verge of starvation: the utility of a shilling to them when they are in employment is less than that of a penny when they are out of it, and yet they never attempt to make provision for the time of need. At the opposite extreme there are misers, in some of whom the passion for saving borders on insanity. . . .
>
> The causes which control the accumulation of wealth differ widely in different countries and different ages. They are not quite the same among any two races, and perhaps not even among any two social classes in the same race. They depend much on social and religious sanctions; and it is remarkable how, when the binding force of custom has been in any degree loosened, differences of personal character will cause neighbours brought up under like conditions to differ from one another more widely and more frequently in their habits of extravagance or thrift than in almost any other respect.[19]

Miserliness, thrift and the action of saving, accumulation of wealth and precautionary savings against future needs are colourfully mixed together here and in most other teaching books on economic theory, simultaneously being inseparably mixed with notions of a thrifty or spendthrift pattern of living and budget management on the expenditure side which is ascetic or expansive to a greater or lesser degree.

The fact that the boundaries of these different patterns of behaviour are, admittedly, generally not immediately apparent and fundamentally can only be established through careful studies of motives was already acknowledged by Knigge in the 1800s, using the example of the miserly 'scrooge'. He describes miserliness as 'one of the most ignoble, most scandalous passions':

> One cannot imagine any baseness of which a miser would not be capable, where his desire for wealth comes into play; and any feeling of a higher kind, friendship, sympathy, and well-wishing, find no place in his heart if they do not bring in money. Indeed, he does not treat himself to the most innocent pleasures, insofar as they cannot be enjoyed without spending money. He sees a thief in every stranger, and in himself a freeloader sponging at the expense of his better self, eating into his money.

But he continues:

> Even so, in our times, where luxury is so exaggerated; where the needs of even the most moderate man who has to live in society and maintain a family are so great; where the price of the essential things for living is daily going up; where the power of money decides so much; where the rich man has such a considerable predominance over the poor man; and lastly, where on the one side deception and falsity and on the other side mistrust and a lack of fellow-mindedness are spreading amongst all ranks and thus trust in the assistance of one's fellows is becoming an uncertain capital; in these times, I believe, one is unjust if one immediately declares a thrifty, cautious man a scrooge, without a closer examination of his circumstances and of the motivations which guide his actions.[20]

Accordingly, empirical analysis of saving has always sought to create operational concepts and delimitations (i.e. which are accessible to precise scrutiny) for the various dimensions of behaviour; it differentiates between 'thrift' and 'rationality in domestic budgeting' or 'use of calculation' by private households, and between the various forms of active savings behaviour with their different motives, in order to come closer to the reality of life in this area than has previously been possible using theoretical models.

To determine thriftiness, the answers to four test questions in our 1959 survey were used.[21] Based on the level of agreement with these four statements, households were divided into three groups – households with developed, moderate, and generously constituted principles of thrift.

It was found that just over half of all households in the Federal Republic of Germany have a more developed sense of thrift; a quarter rank as being moderately thrifty, and a further quarter are relatively free in their spending.

Using this scale, if one looks at the extent to which principles of thrift are present, and in which social classes, then it is revealed more clearly than in the individual test questions that principles of thrift are really developed only as a reaction to a quite particular economic and social position. Where income conditions are low, as a rule an economic mindset and habits of economy are formed which make it possible to manage money objectively under the given circumstances, and at least subjectively to feel more secure in oneself.

It is similarly characteristic of the economic circumstances under which people react by developing minor virtues of thrift that large households, as a rule extended families, far more readily state that they are reticent about expenditures on small luxuries than nuclear families or single persons; a further characteristic is that people with negative expectations on income exhibit strong principles of thrift far more frequently than those with positive expectations on income.

Managing a budget thriftily quite clearly represents a considerable psychological burden for many people, with the result that this behavioural model is very soon done away with among the upper income groups. Possibly even more crucial for this tendency is the fact that the effort to forgo things which thrift requires necessarily relates to larger items among these classes; although their standard justification ceases to be framed in terms of principles of thrift.

In all this, one should of course not forget that our four test questions are based only on a few of the principles of thrift, which in no way encompass the whole range of economical behaviour. Indeed, it is questionable whether 'thriftiness' can be squeezed into a one-dimensional system at all. In many instances, one will come up against a system of principles of thrift (or patterns of thrifty behaviour) where spending money in certain areas is habitually prevented through the development of psychological barriers, while at the same time the threshold for thrift over other types of goods or in other financial orders of scale is perhaps lower. This would mean that principles of thrift are connected with value systems.

If one wishes to observe the effects of thrift and of principles of thrift on how the household budget is managed, then it is necessary to at least neutralize the key circumstances on which the degree of thrift over small purchases is dependent, i.e. particularly level of income and size of household budget. To that end, for this study so-called functional or sliding indices were developed to eliminate these intervening factors. These indices can be constructed such that they vary either one-dimensionally or polydimensionally with various other variables. The factors with which one can vary the index are thus eliminated from the statistical consideration of causes. The researcher will therefore always vary an index with those factors which he wishes to eliminate.

In the present instance, it is sensible to construct a two-dimensional sliding index for principles of thrift. Our assumption is that the development of principles of thrift such as we have observed is a function of income and size of household. For each combination of income level and size of household, the group-specific average of positive responses to the four test questions is determined; next, the households are categorized into the two groups with below-average (free-spending) and above-average (developed) group-specific thriftiness. In this way, a measure is established which varies with the two variables of income and size of household, i.e. a sliding or functional index: depending on the interrelation between size of household and income, the measure against which the household's principles of thrift are measured is applied more or less strictly.

Small households with a large income, which are normally not inclined to exercise a large degree of thrift, can accordingly perhaps be classified as 'thrifty' if the man and woman in the household have answered one or two test questions positively, while large households with a low income (where their circumstances in any case constrain them to exercise principles of thrift) are only confirmed in this if they have answered three or four test questions for thrift positively. The result of this operation is to establish two roughly equally sized groups of households which resemble one another fully, with symmetrical group-specific distribution of income and household size, referenced to these two variables, but which differ in the strictness with which they have developed principles of thrift (respectively referenced to the individual income and household situation).

In psychological terms, the principles of thrift are internalized; if someone has breached his own principles of thrift, then his conscience troubles him. Thus, for example, when asked whether they later regret spending too much money on a momentary whim, positive responses from male heads of household with more strict principles of thrift (52 per cent) are significantly more common than from those with a more generous attitude to spending (36 per cent). Consequently, as income increases this should go hand in hand with psychological changes, e.g. the tightly constrained form of thrift recedes as income increases.

On the other hand, it can be demonstrated that the virtue of thrift partly goes hand in hand with certain personality structures, which cannot then be set aside so easily when there is an improvement in one's economic circumstances; with many people, then, even when economic circumstances are good, there are still motivations for a kind of thrift which really only satisfies an important function where circumstances with regard to income are straightened. Here again one finds confirmation that handling money is also determined by individual factors of personality.[22]

This study, however, offers very little material regarding the psychological genesis of the principles of thrift. It reveals that slightly greater numbers of male heads of household or housewives in households with an awareness of thrift recall having a piggy bank as a child. Similarly, slightly greater numbers of 'thrifty' male heads of household or housewives report that both their parents were similarly thrifty. However, here one needs to bear in mind the possibility of retrospective distortion; the thrift-minded person views the past differently from the more free-spending person. It may be that he is retrospectively including his parents in his general ideology of thrift.

By contrast, the 'thrift-minded' are clearly distinguished from the 'spendthrifts' in their economic habits. When they are considering more sizeable purchases, on their own admission they calculate the purchase through in advance more often than appears to be usual for households with a more relaxed approach to spending; conversely, the response 'I don't cost it out in advance, but say that if I see a bargain, I'll buy it' was given in only a quarter (26 per cent) of households with strong principles of thrift, compared to two-fifths (42 per cent) of households with weak principles of thrift. On a different question, again geared at determining the 'use of calculation', the 'thrifty' households responded positively more frequently than 'non-thrifty' households to the statement: 'At the start of the month, I allocate the budget accurately under different headings, such as rent, food, electricity, washing etc., so that I discount this money.' The reverse was true for the statement: 'I don't divide up the household budget into separate items, but pay everything which needs to be paid as and when, and for as long as the money is there.'

The following question was intended to record the degree of ease with which interviewees were prepared to take out credit if they needed to – in other words, 'to take on debt': 'What would you do in the following situation: assume that you were having some financial difficulties. But you knew that an acquaintance of yours would probably lend you some money. Would you go to them and borrow money, or would you rather limit your spending considerably before borrowing money?'

The answers to this question similarly correlate with the answers to each one of the four test questions which together make up the classification for principles of thrift. People who would rather severely rein in their own spending before borrowing money are more often 'thrifty', whereas those who would borrow money from an acquaintance are more often 'free-spending' in outlook.

So how is this 'thriftiness', which was initially simply recorded verbally, expressed in practice? Which are the expenditures on which the households which claim to think thrice before handing over any money make their savings? In fact, it can be shown that the thrift-minded pass up small temptations and treats somewhat more frequently than the free-spending. They spend less on sweets, cakes, pubs, drinks, etc. and are less frequently found in the role of the generous host. The number of heavy smokers is lower in thrift-minded households. Even hobbies (theatre-going, potted plants, sports equipment, books, pets, collecting) seem to be an area where thrift-minded households economize, especially at the lower income levels. Clearly, when it comes to our principles of thrift, in actual fact we are looking at a degree of forbearance when it comes to life's 'small luxuries'.

If we now ask about the purpose of this forbearance, i.e. for what things these 'small luxuries' are being sacrificed, then the answer could be looked for in two areas: in other household expenditures, and in the ability to save in the more narrow sense, i.e. successful saving, by which we mean building up financial assets. Both areas are equally important in evaluating our question: it would be entirely possible for the principles of thrift (where present) not to find expression in an increased accumulation of financial assets at all, but simply to be a synonym for a certain kind of displacement of expenditure; this kind of thrift would find expression above all in a shift in values on the scale of possible expenditures. Only as a secondary phenomenon would one observe 'not spending', and the accumulation of financial assets.

Our results confirm this first hypothesis only to a limited degree. Households with strong principles of thrift do not make economies either on their children or on their spending on clothing. However, on average they spend a little more on rent and heating, i.e. they live a little better and commit slightly more money to food. These are two observations which are not attributable to lower income or a greater number of people in the household, since these two factors have been eliminated, as mentioned earlier.

By contrast, there are a number of points which seem to lie in favour of the second hypothesis, about the influence of principles of thrift on successful saving. If one deducts all regular expenditures (recurring needs) from the household budget, then the resulting financial room for manoeuvre which can be dedicated to financing individual needs (purchases, trips, holidays, etc.) and to the accumulation of financial assets is on average higher in 'thrifty' households (15.1 per cent of the household budget) than in 'more free-spending' households (12.6 per cent). Thrifty households also make savings when it comes to holidays: in the two years prior to the survey, they had been on holiday less frequently than other households. It was not possible to establish whether they also spend less money on their purchases as well. But it can clearly be shown that on average they accumulate significantly larger financial assets. The result of a slight change in the grouping, into thrift-minded and free-spenders (conducted for other purposes and using two additional test questions) revealed that the 'very thrifty' had saved relatively greater amounts in their bank accounts than the 'very spendthrift', despite having lower earnings; in the lower income groups (less than DM 500), their average financial assets were some 163 per cent of income (as opposed to 66 per cent for the 'very spendthrift'), and among the upper earners (DM 500 and above) the figures were 250 and 136 per cent respectively.

3.1.5 Rationality and the household budget

The general expectation of households where the financial means are insufficient to satisfy all desires is that they do not just 'live for the day' and 'fritter away' their income, but that they 'cut back' and 'cut their coat according to their cloth', to achieve as much as possible even with a modest amount of money. With each expenditure, they should be aware of their limited options, only making the essential purchases and passing up on all less essential ones; they should allocate and calculate, plan and monitor spending, in order to achieve as much success as possible with the given funds. In short, they are expected to act in an economically rational manner.

The first question which this throws up is whether in the actual practice of everyday living it is ever the case that people act 'rationally'. The answer is doubtless 'no' if one equates rational behaviour with ideal maximum requirements, which are practically impossible to achieve. Purely theoretically, you could take as the basis for the assessment a form of rationality in respect of the household budget geared to the ideal of a solution accommodating the subjective concept of utility; the *only* household considered to be acting rationally is the one which coordinates all its desires for quality, the prices of goods and its income to achieve the point of greatest overall satisfaction, using precise powers of calculation and foresight worthy of the clairvoyant. It is self-evident that such households do not exist.

Viewed empirically, that ideal maximum is in fact nothing other than an extreme situation or an extreme behaviour which, while it is not to be found in the real world, is nevertheless of use in describing in conceptual terms the upper end of a scale. Along that scale one can find the actually found patterns of behaviour, of a lower order of rationality.

With the simple artifice of conceiving of rationality not as a cardinal concept but an ordinal one, we thus acquire one possibility of empirically measuring the rationality of patterns of behaviour.

In practice, we can get by even without that conceptual ideal behaviour, without the theoretical maximum, by simply judging each of the patterns of behaviour encountered in a survey by whether each one is more rational, as rational or less rational than the others, without precisely determining how remotely it sits from the conceptual behavioural extreme. One thus defines which patterns of behaviour should be considered as more rational and which as less rational, thereby acquiring a practicable tool which, while it does not measure rationality per se (since this is not encountered anyway in reality), nevertheless measures precisely that part range of rational behaviour which particularly interests us.

There are four statements from our 1959 survey which we can adduce in analysing rationality and the household budget, looking at the area of budget planning and allocation, calculating and monitoring. In different parts of the interview, we asked whether:

- interviewees accurately *calculate the cost* of major purchases in advance;
- those managing the household budget *allocate* the money to their various needs at the start of the budget period;
- they draw up a *shopping list* before shopping for food; and
- they keep an *account book* for the household budget.

These are four forms of organized or habitual behaviour which enable an outsider to identify the intention of having planned and calculated budget management, where that intent is present.

How many households, and which ones, employ such devices to organize their budget management more rationally? The intention of acting in accordance with the laws of economic management – even if only in the smallest measure – can definitely be ascribed to those households which draw up a list of what they need before going shopping, or even to those which regularly record their household expenditures and incomes in an account book. Even the habit of allocating the budget at the start of the budget period to the individual items of expenditure or to think through more major expenditures in advance surely form part of the techniques of good budget management, contributing to managing better with the available means. A household which answers positively to one of these four questions may therefore be described as 'more rational' or 'making more use of calculation' than another which does none of these things.

The responses to our four questions reveal considerable differences, at first sight. It appears to be most common to cost out expenditures in advance: around two-thirds of all housewives (64 per cent) and male heads of household (66 per cent) say that they are in the habit of generally calculating precisely what they can afford to buy when considering bigger purchases. Admittedly, this information is fairly vague, suggesting that 'generally' they 'calculate precisely' before making 'bigger purchases'. One might ask – how frequently? How big? And how precise is the cost estimate? Doubtless much points to the fact that the interviewee wishes to confirm that he sits down with pen and paper to plan his purchases. But if by 'bigger purchases' his understanding encompasses only those things which he could not afford from his freely disposable income in the current income period (week, month) but which require him to save over several such periods, then the statement is practically a tautology. Everyone calculates purchases in advance where they are of a bigger order of scale in one's particular circumstances, even if this is only a momentary reflection in the store to calculate whether one can afford the payment instalments. In short, we cannot be entirely certain whether the interviewee's answer genuinely intends to describe a behaviour which we can categorize as 'more rational' than the behaviour of someone who has given the opposite answer. The information sought and obtained is very generalized.

Let us consider the other three questions, to see whether a more specific behaviour was identified. In just under half of all households (45 per cent), the responsible family member stated that the household budget is allocated precisely at the start of the month to different items, such as rent, food, electricity, washing etc., and that at least in broad outline a budget is drawn up. Here again, we do not know the degree of accuracy with which this allocation is made, whether it is a purely mental exercise or whether the information is written down, whether the money is even physically divided up and kept in various boxes, envelopes, tins, etc. Nevertheless, the pattern of behaviour being described is already significantly more concrete and specific; it is characteristic that significantly fewer interviewees acknowledged this in themselves than acknowledged the principle of 'costing in advance'.

The question about the shopping list featured an even more concrete, more specific scenario. The question itself precisely defined the shopping list as a list made prior to shopping and containing everything which one wanted to buy; furthermore, the situation about which the interviewee was being asked to provide information was confined to the behaviour prior to shopping for food. Whereas 45 per cent of the responsible family members said that they generally allocated their budget at the start of the income period, only 39 per cent said that they always or mostly wrote a shopping list. When asked whether they wrote down what they spent each day on the household (i.e. whether they kept an account book), only 17 per cent responded positively.

It is striking that the practice of using calculation in managing the household budget is not located in any clear, or at least not in any simple, sociological or economic context. Thus we find similar levels of households among all income groups where habits of calculation are embedded in one form or another. The habit of allocating the household budget to various items on the first of the month is particularly common among working households, and slightly more so among white-collar workers and civil servants than blue-collar workers. Household books of account are to be found in noteworthy numbers primarily among the better-off and more educated groups; by contrast, shopping lists were used by housewives comparatively independently of the economic and social situation of a household.

Our survey also clearly demonstrates how the various forms of calculation are connected to one another. A large number (61 per cent) of housewives who keep household books of account almost always use a shopping list; conversely housewives who are not in the habit of keeping household books of account most often (67 per cent) go shopping without a written list, thereby perhaps exposing themselves more to the attraction of offers than those women who can use the 'mental prop' of the shopping list.

There is similarly a close connection between the habit in a household of costing out bigger purchases in advance and the technique of allocating the money at the start of the month across various items of expenditure. Where both partners in a household indicate that they cost out bigger purchases in advance, the majority of the housewives also indicate that they allocated the budget at the start of the month; conversely, in households where neither partner costs out purchases in advance, barely a quarter are in the habit of budgeting in this way.

By contrast, there is only a weak connection between these two practices for allocating money (a household account book and shopping lists on the one hand, and advance planning for bigger purchases and allocating money to different items in advance on the other). The hypothesis arises that the practices of behaviour involving calculation are multidimensional, or at least not linearly one-dimensional, in psychological terms. Rather, it appears that rationality as applied to the household budget derives from various motives which we cannot pursue further here.

If one summarizes the responses to the four test questions together and arranges them in order of the frequency with which they express behaviour which involves planning and calculation, using a scale of decreasing use of calculation, then it shows that only 6 per cent of those households interviewed operate with all four virtues of proper budget management, while the opposite case (no positive responses to the test questions) is true of 17 per cent of households.

The type of use of calculation determined operationally using this index has little to do with the economic or social position of the households. While it is possible to see that farmers and independents working in retail and commerce appear to make slightly less use of calculation, this could be attributable to a 'weakness in the index'. The question about whether someone allocates their money at the start of the month has little meaning for these professional groups, in view of their irregular income stream, which is frequently governed by the cycles of nature. However, we are not excluding these professional groups from the considerations set out below, which may occasionally result in a certain blurring of the findings. We regard this as acceptable in the interest of providing a comprehensive picture of all households in the Federal Republic.

Let us now address the question as to the significance of the use of calculation, as identified, for the household's economic dispositions, and especially the behaviour of the household with regard to money (Table 3.6). It is, firstly, particularly striking to note the connection between the impression that the interviewer had of the way the household was kept and the use of calculation by the households, identified only subsequently using the indicators as described (indicators concealed from the interviewer).

'Well-kept' households make above-average use of calculation; households which appear to be particularly disordered are largely run by heads of household who appear to have little financial planning in place. Accordingly, use of calculation appears to be an expression of a general ordering and creative force, which then also finds clear expression in an orderly home and in the manner in which the whole household is presented.

This ordering and creative force must naturally also find expression in the attitude of the interviewees towards money. A first indicator of this is a question which we have already considered in looking at the principles of thrift: 'What would you say about yourself: are you good at managing money and able to budget accurately, or are you somewhat lavish when it comes to spending money?'

Table 3.6 Households which give the impression of being less well-kept use less planning in managing the budget (%)

Impression made by household on interviewer	*Households where use of calculation is:*			
	Very high	*Relatively high*	*Relatively low*	*Largely absent*
Households with net monthly income of main earner up to DM 600				
Very well-kept	37	26	26	11
Orderly	19	36	29	16
Disorderly	(12)	(21)	(39)	(28)
Households with net monthly income of main earner DM 600 and above				
Very well-kept	29	37	24	10
Orderly	21	27	29	23
Disorderly	(15)	(16)	(46)	(23)

In the households with main earner income of under DM 600 net, 76 per cent of the heads of households with 'high use of calculation' said that they could budget accurately, compared with only 56 per cent of those in 'households with largely no planning'; this correlation is even more pronounced in higher-income households (70 per cent as against 44 per cent). Thus it is not surprising that in general there is a connection between principles of thrift and behaviour involving use of calculation; while this does not hold true consistently for each one of the four patterns of behaviour, it is true for all four taken together.

Households with very high use of calculation exhibit above-average frequency in the category for strict principles of thrift. Similarly, households making use of calculation, especially in the upper-income groups, are inclined to save regularly. The statement: 'I save by regularly putting away a certain amount. I organize my spending around this, and it's the best way for me to get on' is agreed with in households with main earner income of DM 600 and above by only 9 per cent of the heads of households which largely do not engage in planning, but by 32 per cent of heads of households with high use of calculation. Accordingly, one can also consider regularity of saving as a result of the behavioural toolkit of planned household budget management.

If one asks what these households are planning and saving for, then a whole series of indices (which we cannot exhaustively list here in table form) reveals that that households making use of calculation purchase more consumer durables than those not engaging in planning:

- We encountered 'good to average' equipment (in terms of items of consumer goods, and looking at 15 selected items such as fridge, TV, silver cutlery, etc.) in 76 per cent of households with high use of calculation, but in only 57 per cent of households which largely do not engage in planning where the main earner income was under DM 600; in higher-income families, the correlation is understandably not so pronounced.
- In 44 per cent of households with high use of calculation, but in only 25 per cent of households which largely do not engage in planning where the main earner income was under DM 600, both partners frequently discuss desired purchases (Question 34); this correlation is maintained in the higher-income households.
- In 63 per cent of households with high use of calculation, but in only 52 per cent of households which largely do not engage in planning where the main earner income was under DM 600, the cost framework for the purchases planned by the head of the household for the next three years is over DM 500; this correlation, too, is similarly maintained in the higher-income households, at a higher level.
- In households with high use of calculation where the main earner income was under DM 600, the average proportion of total regular saving (short term and long term) in relation to the household budget was 6.5 per cent, whereas in households which largely do not engage in planning it was only 4.5 per cent. This relation is maintained in the higher-income households, at an increased level.
- While on average the financial assets of households with high use of calculation are no greater than those of the households which do not plan, it is probably true that their total assets are greater. The growth in assets from which they benefit when compared with the others clearly mainly consists in their better-furnished home; since conversely, the findings show that there is no above-average proportion of households which use calculation who are planning to build their own home or to acquire property. Accordingly, such households are clearly largely channelling their energies into having a good standard of living.

Lastly, a study of the subjective liquidity[23] of households which use calculation and households with poor use of planning reveals an

Table 3.7 High use of calculation reduces subjective liquidity
Question: 'Let's assume that you suddenly lost all your income and also weren't receiving any benefits and no other support – how long would you be able to survive on what you have put by? I mean, before you would have to cut back significantly on spending or would even need to start selling things?'

	Households where use of calculation is:			
	Very high(%)	*Relatively high(%)*	*Relatively low(%)*	*Largely absent(%)*
Households with net monthly income of main earner up to DM 600				
Not longer than one month	62	56	51	51
1–6 months	20	22	19	21
6 months or more	14	17	26	23
No answer	4	5	4	5
	100	100	100	100
Households with net monthly income of main earner DM 600 and above				
Not longer than one month	(40)	(39)	(34)	(17)
1–6 months	(27)	(27)	(23)	(24)
6 months or more	(31)	(27)	(34)	(52)
No answer	(2)	(7)	(9)	(7)
	100	100	100	100

interesting finding (Table 3.7). The less a household makes use of calculation, the more optimistic the subjective feeling of liquidity. A glance at the financial reserves actually saved and their existing assets, however, reveals that households which are weak on planning in no way objectively demonstrate a better liquidity position, despite being firmly convinced of this; generally, such households appear to be much less concerned when facing what are objectively similar preconditions, whereas households where calculation is the rule clearly become jittery more easily. It would however be conceivable that the households which use calculation are less readily inclined to consider as liquid funds assets which – objectively – could easily be converted into cash, unlike those households which engage in only patchy or no planning; however, the question expressly excluded thinking about the sale of such assets.

At first, it may seem as if households which use calculation were conducting themselves according to the principle that as far as possible, existing credit balances or assets should not be drawn on. The low subjective liquidity of these households, however, probably derives indirectly rather than directly from this special kind of discipline in matters of economy: anyone who plans his budget, for whatever motives, by definition lends it a certain rigidity which subjectively makes him less cash-rich than the person who has exactly the same amount of money but who plans and forecasts less.

Overall, the impression is gained that households which use calculation are generally inclined to invest in a stronger psychological armoury against spending money. Expenditures are not only planned and monitored; these households also tend to develop strong principles of thrift. They go about the actual business of saving according to more stringent rules, and their psychological alarm is triggered more readily than others when their level of liquid funds falls.

However, E. Egner is correct in stating that there can be no 'saving for its own sake' in a household which operates in accordance with the mindset of well-managed budgeting:

> True saving always means setting aside funds for particular purposes, whether this is for career training for one's children, a dowry for a daughter, building a house, or more generally for life's setbacks, such as the illness or death of the breadwinner, or for an old-age pension. Saving for its own sake is an expression of miserliness, is a symptom of perversity, which anyone truly embracing the logic of well-managed budgeting cannot justify any more than he can justify wastefulness. That is why it is so misleading, as argued earlier, to define managing the household budget purely in terms of saving.[24]

The 'logic of well-managed budgeting', of rationality in the execution of budget management in private households, thus first finds expression in a planned orientation towards goals being pursued through the management of that budget. The concluding part of this section looks briefly at precisely these goals.

3.1.6 The goals of household budget management

Where households manage their budget with thrift and in a rational manner, then ultimately this drive for rationality is expressed partly in the accumulation of financial assets, but mainly in the acquisition of assets in general, among which we must count in particular equipping the home with consumer items (i.e. domestic consumer goods), the home itself, and personal possessions. In an industrialized society moving towards a situation of material surplus, the key goals of budget management – the items for which one 'budgets' and plans, allocates funds and limits spending – are not found in the ongoing need for food or expenditures on rent, heating, etc. Such expenditures feature increasingly less prominently in the household budget, with the key goals being the consumer goods associated with private vehicle ownership, with domestic luxuries, with labour-saving within the home, and with leisure pursuits – all areas which are so clearly characteristic of the contemporary lifestyle.[25]

Thus it is only natural that in the daily discussions within the family only a few topics are discussed as frequently as the items which have been bought by the household and those which its members would still like to buy. In around two-fifths of households, the head of the house or the housewife had 'discussed desired purchases' in the period prior to the interview in relation to five or more items; in a further third of households, three to four wishes were discussed, and only 29 per cent of households had relatively few discussions about consumer wishes. It was very noticeable that discussions of wishes do not become any less frequent with higher income (on the grounds that more wishes have already been satisfied); indeed, the reverse is the case, and such discussions are even held more frequently (Table 3.8). This can also be stated

Table 3.8 Wishes more frequently discussed in households which use calculation (%)

Number of wishes discussed	*Households where use of calculation is:*			
	Very high	*Relatively high*	*Relatively low*	*Largely absent*
Households with net monthly income of main earner up to DM 600				
Five or more	44	47	35	25
Three to four	32	23	36	36
Less than three	24	30	29	39
	100	100	100	100
Households with net monthly income of main earner DM 600 and above				
Five or more	(40)	(47)	(44)	(22)
Three to four	(31)	(31)	(32)	(41)
Less than three	(29)	(22)	(24)	(37)
	100	100	100	100

in the opposite way: the lower the income, the more conversations about desired purchases dry up. Fewer than three areas were discussed in only 13 per cent of households with main earner income of DM 1000 and above, but in 51 per cent of households with net income of under DM 300. This correlation unmistakably expresses a tendency to avoid the all-too-great tension between wishes and the possibility of realizing those wishes.

If one asks how those households with little use of calculation and little practice of thrift actually manage to survive financially, then here we find a key to understanding the unconscious mental adjustment processes which help people to live within their means: the households which do not plan ahead are also the households with fewer wishes. Making plans, discussing purchases, wanting to beautify and improve one's own home, is already a first step away from the dull resignation of an everyday life without dreams and towards a world of actively framing one's life, planning and calculating with a positive view of the future. The situation where in the period prior to the interview the household discussed five or more wishes was recorded almost twice as frequently among 'high use of calculation' households than among those where use of calculation is 'largely absent'. This finding was largely independent of the level of income.

In these discussions about wishes, consumer goods play an important role. We have identified the consumer goods which they own, those which they still aspire to have, and those which they want to buy in the next three years. There was a good match between information from male and female partners; it was, however, noted that housewives more frequently wished for household appliances (like a washing machine) whereas male partners more frequently wish for a car.

In terms of standard of living and the schedule of purchases for the households, a particular class of consumer goods played a special part at the time of the survey: the labour-saving products of modern domestic engineering, such as the fridge, the washing machine, the food processor. This trend is likely to be somewhat more pronounced today, but it is set to continue for some time. Furthermore, many people aspired to owning a TV and a car; these are similarly devices which enable the consumer to employ modern engineering in the service of satisfying his needs.

Naturally, these wishes are also associated with income; the wealthier a household, the more of the items which are generally sought after it will already own. However, this does not mean that the number of wishes in the household diminishes – the only effect is that this desire is directed towards other objects. In fact, there is no correlation between the number of wishes and income; satisfied wishes are always being replaced by others. By contrast, a clear correlation with age can be identified. On average, heads of household aged under 30 wish for 5.2 items with a value of around DM 3600, whereas heads of household aged 60 and over wish for only 1.9 items, with a value of around DM 1100.

The same is observable with regard to planned purchases. Here, too, there is also clearly an influence due to stage in life: the older one becomes, the less the prospect of increases in income, the more wishes one has already satisfied, the more one has become accustomed to – and thus content with – what has been achieved, and accordingly the number and value of the wishes remaining unfulfilled increasingly decline. But there is also a direct influence due to the psychodynamics of ageing: the engagement with society and its ethos of success diminishes.[26]

The importance of wishes for the economic behaviour of the household is hypothesized as being a dual one: on the one hand, it stimulates readiness to earn more money or to constrain oneself in other ways and to manage the household budget in a rational manner; but on the other hand, those households which manage their budget in a more rational manner can afford to satisfy such wishes more often. In both senses, then, plans and wishes with regard to purchases form part of the goals of managing the budget. It will be difficult ever to separate out the degree to which these goals influence thrift and rationality, or even income, in the household, and conversely the extent to which they are only made possible at all by the household earning sufficient means to be able to afford them. We cannot explore either question in fuller detail here.[27]

Rather, our concern is to point out a material fact which repeatedly comes to the fore when engaging with the issue of budget management in the private household, but which has not yet found appropriate regard in the statistics and in economic theory. The goals of budget management are also the goals of saving, and vice versa; money being saved in a bank account is not necessarily there in order to accumulate wealth or assets, but is more generally intended to realize the household's goals. In turn, the accumulation of financial assets is just one goal among many; and it is, one should add, a largely undetermined, relatively late-appearing and fairly low-ranking goal.

This line of thinking is, of course, not a new one; but the recognition of the strong extent to which consumption-oriented goals are dominant in the economic management of private households should certainly serve as valuable new information. Otherwise, for example, it would not be possible for demand deposits to be included in the 'volume of money' in an economy, but to exclude savings deposits, even though at least a part of the latter is not much less 'liquid' and, in many cases, serves objectives practically no different from the former.

To cast light on the set of issues involved in this situation, the next section seeks, among other things, to examine how the amounts of money collected into these bank accounts are used. Are they to be used in the immediate future for ongoing expenditures? Will they be left sitting in the account, at least for a time, with a view to buying a consumer durable of some kind? Or will they remain in the account for the long term, for the purposes – not defined more specifically than this – of providing a financial buffer for the future and to build up assets? This set of questions moves the discussion on from a general analysis of the goals and principles of household budget management to a particular analysis of how money is handled, in a more narrow sense.

3.2 A behavioural approach to monetary theory

3.2.1 Introduction

More than 50 years after the world left the gold standard, monetary theory has not yet succeeded in developing a generally accepted explanation of money and its functioning in our society, the value and 'image' of world currencies and the factors influencing their price relations, to say nothing of monetary reform, the role of gold in central bank reserves and the conceptual jungle of the so-called need for international liquidity. Four hundred years of metallic currencies, and, in due course, of a purely quantitative approach to the problems of the value of money have left their mark on all theoretical efforts to explain the working of the monetary system both within the national economies and on the international level; even today many authors rely on the metallic or quasi-metallic character of money tokens and/or their quantity and velocity of circulation to explain the value of all other forms of visible and invisible money which have outdone the remaining coins and notes by more than 3 : 1 in most industrial countries.

It seems rather embarrassing that after centuries of practical experience with, and learned deliberations about, the subject monetary experts still cannot even supply a precise definition of 'money'.[28] Throughout the long history of monetary theory almost everyone claiming competence in the field has pasted together his own definition to fit his particular monetary *Weltanschauung*. Aristotle's commodity interpretation of money ('silver and iron and other such matters') has shown particular longevity and weathered centuries, if superficially updated into the 'convention theory', out of which eventually grew the jurisprudential description of money as a 'creation of the legal order'.[29] In the same vein, but asking what money does rather than what it is, functional definitions of money abounded; with the emergence and rapid increase in importance of 'invisible money', monetary theory has amalgamated both viewpoints into a pragmatic, if contested, concept where money is defined 'in the usual way as the sum of demand deposits adjusted at commercial banks and currency outside the banks'.[30]

Common to these attempts at defining money is the tendency by most authors to base their elaborations on particular phenotypes of money, i.e. contemporary and/or previous forms of *currency*. Attacking the question from this angle, however, only led them to lose sight of the nature and the essence of *money*; consequently the somewhat surprising situation ensued that this vital area of monetary theory, the concept of money, is practically still virgin territory.

Even though the idea that 'money in its social sense is a means of communication and social ranking'[31] has been around for some time, monetarians as of yet have not taken advantage of this chance to break through the narrow confines of traditional money theory. Any theoretical concept, however, which purports to be more than just a set of learned teachings for monetary artisans has to deal with the role of money as a communicative symbol in social life, where it is 'indeed one of the most remarkable and important of all human symbolizations'.[32]

3.2.2 The theory of money*

This idea, of course, imposes upon the theory of money a fundamentally different point of departure while at the same time its direction and final destination also change. It implies a breaking away from the glitter of gold and silver, or any other current and awe-inspiring physiognomy which monetary tokens and symbols may have or have had, and calls for the humble chore of observing people in their actual day-to-day dealings with whatever means of payment they may use. If indeed, as we hypothesized, money's role is that of a communication symbol, then we must watch its actual performance in its natural environment and not be satisfied with speculations about its maximum performance in

* The author is indebted to Hartmut Garding for linguistic advice and help with computer technique.

an ideal monetary system; we must try to understand how millions of individual decisions cause the figures of our bank statistics to swell or dwindle.

What we are suggesting in effect here is to ban the chimera 'velocity of circulation' from monetary theory and substitute habitualized cash-holding patterns, the income–expenditure rhythm of households, and the popularity of cash versus bank accounts in its stead. While, as Heinrich Rittershausen[33] observes, no country has ever been successful in producing reliable data about the velocity of circulation of money, the concepts mentioned above can all be operationalized and documented without great theoretical pains.

But also the motives for changes in spending and saving habits must become targets of inquiry so that the causes of monetary fluctuation may become clearer. This demand follows the lead taken by the income theory of money, which started from the laudable premise that causal relationships are not to be sought between money volume and price level, but rather between the motives and reactions of people who either do or do not spend, save or borrow money. Unfortunately, though, income theory will remain trivial as long as it does not contain information about the process by which habitualized behaviour is formed in the first place and by which such behaviour changes quite drastically at times.

No justification whatsoever remains to the widespread argument that an admission of psychology, social psychology and sociology into the realm of monetary theory is illegitimate.[34] The consequences of such an admission are clear: up to now, the principle of construction and instruction in monetary theory was to begin by building highly abstract, oversimplified models and to relax the theoretical assumptions step by step in order to adapt the model to the reality of a given currency and credit system. The result was a neatly boxed-in scheme with the banking sector on one side and the private and public sector on the other. Communications between and within sectors were very rigidly defined and concerned the creation and the disappearance of means of payment. In these sterile surroundings, monetary theory deteriorated into a description of national variations on the basic scheme and taught the skills of how to operate within various national banking systems.

This needs to be amended and the most fundamental change is implied in regarding the monetary scene as an event that is carried out by a population of actors, each one acting his part as it is defined by his individual psychological make-up, by his intents, and by the prescriptions of his social role. Attitudes, motives and group behaviour certainly must concern and interest the monetary economist – unless, of course, he chooses to regard his work as artistic rather than scientific.

'Science', Skinner says, 'is first of all a set of attitudes. It is a disposition to deal with the facts rather than with what someone has said about them.'[35] This is not enough, though, because the attempt to turn to the facts holds the potential danger of operating the already proverbial 'data-collecting vacuum cleaner' while trying to gather facts; a phenomenon not at all unfamiliar in the social sciences. The disposition, then, to 'deal with the facts' must include a basic hypothesis about their nature, or as Skinner put it:

> If we are to use the methods of science in the field of human affairs, we must assume that behavior is lawful and determined. We must expect to discover that what a man does is the result of specifiable conditions and that once these conditions have been discovered, we can anticipate and to some extent determine his actions.[36]

If monetary theory is to be put on a true scientific footing, any 'specifiable conditions' of the monetary communication system as well as the resulting human behaviour must be extracted from the stream of social activities and, subsequently, fitted into an explanatory theoretical framework. A prerequisite for this undertaking, of course, is a definition of money which is both operational and practical, i.e. which has room not only for coins and notes, cheques, credit cards or, to go to the extreme, magnetized spots on a tape reel, but also for ancient currencies, like cowrie, or not so ancient ones, like unopened packs of American cigarettes.[37]

Departing from this stage of explanation, the further development of monetary theory is aimed at the goal of prediction. Here we must go beyond the stimulus–response relation of our descriptive stage and search for the reasons behind monetary dispositions. These include decisions about income allocation (spending or saving), about the timing of purchases (save now, buy later, or vice versa), decisions about the ways of saving and means of capital accumulation and, last but not least, the specific techniques employed in implementing such decisions (cash, cheque, credit, etc.).[38]

In such analysis of motivated behaviour, which it all boils down to, we cannot possibly overlook the key role of attitudes as the long-term organizers and stabilizers of human action.[39] It is through attitudes and their future-oriented counterpart, expectations, that we can find a way to make the transition from individual behaviour to group phenomena within a society. Attitudes towards money and its part as a symbol are the 'sesame' which opens the road to an understanding of inflation or stagnation; by virtue of their relative stability they also permit prediction, so they can be used as tools of prognosis.

From here on, the further direction and final destination of monetary theory are quite obvious; after discovering the 'specifiable conditions' of behaviour and after being able to anticipate it, only the control of human actions is left. In the realm of money this is probably the most serious and difficult task. Restraining or inducing people to spend, save or borrow is never an isolated affair of the money market but has repercussions throughout the entire economy. Measures of the above kind quickly go beyond the cool atmosphere of monetary policy decisions into the heated climate of political and economic goals, interests and pressures. Monetary policy can ill afford to remain uncommitted in such value-laden controversies. Since the preservation of the essential role of money is, almost by definition, its prime objective, the long-term defence of that role over short-sighted attacks can come from its quarters only.

If based on a thorough insight into the ways people handle money and the extent to which they trust the monetary system, monetary policy becomes a most effective *defensor fidei*.

3.2.3 Monetary theory and empirical research

Fortunately we do possess the tools needed to deal with the task laid out here; the days when social scientists had to direct much of their energy towards seeking recognition and acceptance for their newly developed methods of empirical research may safely be considered as bygone. The technique of conducting large field surveys addressed to thousands of respondents in an attempt to uncover meaningful relationships between opinions, knowledge, attitudinal preferences and overt behaviour has proved its viability and is here to stay.

To an economist who has directed much of his interest towards survey research this is a most gratifying observation. The reception of surveys as a valuable research tool now permits scholars to focus attention on the essential problem of trying to consolidate the many divergent theoretical concepts about origins and types of human behaviour.

The need for such consolidation and integration is widely recognized and, characteristically, is being dealt with interdisciplinarily: K. Boulding, K. Deutsch, P.G. Herbst, Th. Newcomb and T. Parsons may be named as examples.[40] Whereas these efforts, originating in history, political science or sociology, are concerned mostly with concepts that would eventually be applicable to human behaviour as a whole, our interest here is with economic behaviour primarily, more precisely with questions relating to monetary behaviour. Here the theoretical gaps separating contenders of various schools seem almost unbridgeable, even though the near-irrepressible doggedness with which inflation continues to creep up on national economies all over the globe makes it imperative to search for common theoretical grounds, on which combined efforts to combat the deterioration of currencies may be based.

It is in this light that the argument for a consolidation of theories should be evaluated. The unfortunate state of affairs as revealed in almost any volume of any economic periodical is that authors not only waste much time and energy on such irrelevant considerations as the formalization of money demand, velocity of circulation, income–expenditure formulas and the like, but also block publication space by splashing their petty squabbles about the importance of quite insignificant parameters or impractical variable definitions all over the pages of renowned journals. Not even the claim that the monetary fate of the nation is at stake can serve as an excuse for these academic exercises, because in the last analysis it is still presidential or prime ministerial authority and/or the diligence, swiftness and intuitive judgement on the part of central banks which decide whether a currency is traded higher or lower on the world market.

There can hardly be any doubt that the recent availability of high-speed digital computers has revolutionized, or rather is still revolutionizing, the social sciences. After a mere 12 years of development the fourth computer generation has emerged and the enormous storage capacities combined with a wide versatility in programming allow for relatively easy handling of the large bulks of data typical in survey research.

As increasing interest in economic behaviour meets with expanding facilities of electronic data processing the stage is set for a confrontation between the various factions of monetary theory. The heart of the question seems to be whether the general concept of economic processes should orient itself along the lines of stringently defined abstract models, apt to be expressed in mathematical terms but rather removed from real life, or whether it should rely on the more cumbersome and voluminous results of survey series, which are, however, immediate reflections of reality.

The model approach certainly may be expected to bridge some theoretical gaps rather quickly, revealing certain interaction patterns among socio-economic aggregates, as simultaneous processing of far greater numbers of relevant variables than ever before has become possible through computers. On the debit side of the model approach, the substantial loss of information alongside with the necessity to make all sorts of untested, untestable and sometimes outright unrealistic assumptions in creating models weighs heavy.

A few other aspects of mathematical economics need to be listed here, even though this author rather uneasily recognizes the fact that such critique must, in the light of the nature of this contribution, be made rather summarily and without due reference to specific models. Nevertheless some of these remarks might prove general enough to apply to at least a large number of specimens of the model family.

A basic shortcoming of such constructs is the lack of a provision which would allow the model to undergo the same type of blow-up and shrinkage that continuously occurs in an economy. By virtue of its contribution the model economy merely spins in its mathematically described orbit, unable to simulate the gyrations along an expanding and contracting spiral of its real-life counterpart. A behaviourally oriented system, on the other hand, can easily provide this essential, by simply introducing changing moods, waves of optimism and pessimism, or other attitudinal variables into the scheme. Given the possibility to locate and measure such variables accurately, this procedure hardly leaves any ground for misreading the actual stage of the business cycle. Where mere extrapolations of statistical series fail to indicate a turning point in advance, our 'gyroscope' of attitudes rather reliably does just that.[41]

As a further consequence of mathematically confining reality, technical considerations necessitate the distillation of 'chemically pure' and 'autonomous' variables which no longer possess even the remote resemblance to factors in real life and only serve to complicate the model construction. This method therefore is not only highly inflexible, but also most unrealistic as the essence of any real-life economy, namely the feedbacks and interdependencies, is defined away and excluded from the model.

It is not by chance that in many so-called empirical tests made with aggregate time series, years with extraordinary characteristics like the Second World War or the Korean War are frequently left out. There is no conceivable reason why a theoretical model should back away from such periods of 'special circumstances', unless, of course, by its very construction it is not equipped to deal with them. In such cases, however, the question arises whether the goodness of the fit for 'normal' periods truly represents a heuristic advance or whether it does not simply mean that these times are normal, something we knew before; the fact that in times without internal or external disturbances any social subsystem is upheld and aided in its smooth functioning by any number of psychological and sociological factors based on authority or habitualization, is common knowledge to sociologists. Only in times of crisis and severe stress does the essential structure of a subsystem as well as its viability become apparent; but in such periods the model regressions fit badly.

Even in 'normal' times subsystems undergo fluctuations by which they are altered. Authorities and institutions suffer from wear and tear, losing in influence by abrasion and erosion; others move in to fill the void. Changes in institutions provoke changes in behaviour; another commonplace which model economics do not provide for. Nor can they recognize the influence of changing preferences, moods and fashions, where habitual behaviour (which suits the model) is discarded in favour of 'problem-solving behaviour'[42] (which breaks it wide open).

In summary, there is no reason to accept the underlying assumption of any model construction that extrapolation even from extended time series *eo ipso* solves the problem of prediction. Neither institutional structures nor attitudinal preferences typical of the past can be assumed to be necessarily relevant for the future. The use of surveys as a base for developing notions about the functioning of a monetary system may, in contrast, involve a much more prolonged and painstaking search for behaviour patterns; once known, however, these ultimately will allow both for prediction and control. Most of the relevant information about types and causes of economic activities can be retained using this approach; the theoretical edifice can be built on the firm ground of empirically verifiable theses.

Oddly enough, the advent of computers in the social sciences, which made large-scale survey research feasible in the first place, has also tipped the scales in favour of a more mathematical approach. This may well be due to the relative ease with which rigorously defined data-set properties and relationships can be described to and processed by the machine. None the less, this author would like to make a case for the survey approach not only because he considers the development of a theoretical scheme based upon a wealth of factual information drawn from surveys more adequate to the nature of live behaviour, but also because he believes that the application of electronic information processors to survey-data analysis imposes the necessity to adapt research methods and analysis techniques to the flexibility and potential of these machines.

(a) Psychological variables in economic behaviour

As to the necessity of incorporating psychological findings into economic research, Katona has delivered a most convincing argument in his *Survey of Consumer Finances* series.[43] This record of successful research as well as the results of our own studies at the Forschungsstelle für empirische Sozialökonomik in Cologne demonstrate convincingly that consumption, public finance and monetary theory may well profit from widening their horizon by employing survey research.

To provide some evidence for this claim, mention may be made of a study conducted by our Cologne Research Centre several years ago. It dealt with monetary dispositions in both senses of the word, i.e. with attitudes vis-à-vis saving, spending and money borrowing and with the actual saving and spending decisions. Of particular interest was the question whether demographic and attitudinal variables could be ranked according to their strength of influence upon monetary decisions. Traditional thinking usually favoured demographic variables (like income, age, education, profession, etc.) over psychological factors, like optimism or pessimism regarding the current business situation, and trust or distrust in the monetary system and its institutions. Our basic assumption was that such attitudinal preferences would influence people's decisions about spending and saving quite noticeably, a conviction which was supported by the performance of a Consumer Sentiment Index,[44] where consumer optimism or the lack thereof has proven most powerful in predicting consumer behaviour. On the other hand, it was quite clear that demographic variables in some form or other would duly display an influence of their own; so the question arose: which ones and in what strength? Our quota sample was representative of private households in the Federal Republic; it comprised 1050 family units in which a total of 2435 persons were interviewed. In order to find out whether every individual in an economic community can, except for income difference, be assumed to act in the same way – as traditional thinking will have it – we planned to test various kinds of monetary decisions against a number of different character types. In other words, we are now dealing with the specifiable conditions of the monetary system, i.e. the question is: who does the spending, saving and borrowing? An added feature of particular interest is the question whether demographic or psychological variables are more powerful in determining the 'who'.

Rather than trying to construct psychological homunculi we asked our respondents to classify themselves with respect to a list of 17 'good' and 19 'bad' character traits. As might be expected, socially acceptable qualities like: 'I can't keep grudges against people'; 'I get along with anyone' or 'I make friends easily' were checked rather frequently (by 46, 42 and 34 per cent of all respondents respectively). Approximately a third confirmed to be industrious, thorough and exact in their work. Roughly

25 per cent enjoyed solitude, tended towards moodiness, were punctual or felt they could keep a secret. Traditional virtues like moral strictness and austerity, self-discipline, the ready acceptance of social responsibility, firm principles, emotional balance and energetic conduct were claimed by a fifth to a sixth. With approximately the same frequency of 15–20 per cent, people confessed, on the other hand, to be just a bit on the extravagant, easy-going, inconsistent, talkative, irascible, indecisive, ruthless, vindictive or penny-pinching side.[45]

It soon became apparent that certain clusters of traits recurred rather frequently across individuals, as could actually be expected since these qualities reflect a basic psychological make-up that manifests itself with considerable internal consistency. We therefore combined repeatedly coinciding traits into personality syndromes in order to be able to test the emerging psychological types for differences in their attitudes towards money as well as their spending and saving habits. Technically this was done by registering for any one individual four to five traits of one type and allowing only one or two mentions of qualities of its antipode type.

So, for example, respondents who named four or more qualities of the left column below, but only one or two of the right column were categorized as 'punctilious' (which was possible in 10 per cent of all cases), whereas naming three or more of the right and one or two of the left column would put that person on to the category 'easy-going' (9 per cent):

Punctilious	*Easy-going*
Resentful	Extravagant
Meticulous	Inconstant
Avaricious	Untidy
Thorough	Light-minded
Austere	Erratic
Punctual	

In the same fashion the following other dichotomies could be constructed:

	%		%
Orderly	9	Desultory	15
Vigorous	12	Weakly	15
Introverted	11	Extraverted	11

(b) The psychology of saving

For our particular purposes it seemed even more important to have some indications as to the attitudes held towards thrift and extravagance; the answers to the following questions gave us some clues.

Question 1. When it comes to spending money, would you say you can keep your pennies together, you carefully budget your expenses, or do you rather like to spend freely?

Question 2. Would you think that thriftiness is an essential and desirable quality of character?

Question 3. Suppose you would like to see a particular movie. But as you get to the theatre all except the expensive balcony seats are sold out. Would you still see the film or would you rather return some other night?

Question 4. Suppose you have just been to visit someone and as you want to return home you miss the bus. Your alternatives are to wait two hours for the next bus or to take a cab and pay about two pounds. What would you do?

Question 5. An old proverb says: 'Save in time to have in need!' Do you think that this is true for our present time or do you feel that it does not make much sense nowadays to save and prepare for bad times?

Question 6. Here are three opinions about saving. With which one would you agree?

Left: Saving? I think one should enjoy life now with the money one has. Who knows whether the money in the banks will not be devalued and lost again?
Middle: In my opinion one should think twice before spending a penny, one should save as much as possible and if necessary give up a thing or two in life.
Right: I feel it makes a lot of sense to save some money, but within limits. I would not want to forgo every little wish one may have.

Upon the reactions to these questions we were able to categorize as 'very thrifty' 12 per cent, 'thrifty' 19 per cent, 'extravagant' 5 per cent and 'extremely extravagant' 6 per cent. In order to add still a further dimension, the classification of tempers rendered as 'very conscientious' 10 per cent, 'conscientious' 20 per cent, 'carefree' 8 per cent and 'very carefree' 7 per cent.[46]

Even though a large part of the sample remained outside the taxonomy in each case, the various types were represented in large enough numbers to allow for some checks against demographic variables in order to exclude misinterpretations later. In most of our contrast pairs, men and women were found in near equal proportions; the fact that male respondents had a slight edge over the 'weaker sex' in the vigorous category does not surprise at all. Women on the other hand were generally somewhat thriftier than men.

Another matter is age, which did influence the classification to some extent. People under 30 were found three times as often in the easy-going group than were their elders, who in turn dominated among the punctilious. Similarily extravertedness was much more prominent among young people; those over 60 seemed more introverted. The 30- to 40-year-olds are markedly more vigorous than either the younger or the older age groups. But most interesting was the fact that thrift was not only considerably more widespread among the older people than among the younger, but that equally distinct differences appeared between the orderly, the punctilious and the introverts and their respective antipodes; the differences here lie between 1:2 and 1:3.

Switching from saving to spending, it is quite clear that income expectations play a certain role in purchasing decisions. An increase in income over the next 12 months was expected by the easy-going, desultory, carefree and young unless they evaded the point by arguing their income would remain the same. A cutback in income was thought possible by the introverts, the older and the orderly groups. These examples indicate that psychological dispositions do have an influence of their own right in certain areas of economic behaviour; after all, it is not money that 'rules the world' but rather people who shape the monetary events according to their own peculiar whims.[47]

But not only age and sex are among those variables which, it is claimed at least, influence human behaviour. A number of social constraints and group norms are thought to wield their weight. We wanted to know: which ones?

Neither religion (Catholic–Protestant) nor residence (urban–rural) had any significant impact on our classification. Education did show a slight influence as respondents tended to be less punctilious and less weakly with increasing levels of schooling. This was confirmed by a check against social strata, where vigour and extravertedness increased with higher rungs on the social ladder and, of course, with age. The same trend again appeared with income groups where vigour, and, due to age, punctiliousness tended to register more often in the higher-income brackets.

Table 3.9 Marital status of respondents (%)

	Single	*Married*	*Widowed*	*All groups*
Punctilious	5	11	14	10
Easy-going	21	5	3	9
Total	100	100	100	100
Cases	648	1500	229	2377
Thrifty	38	56	68	52
Extravagant	19	7	5	10
Total	100	100	100	100
Cases	647	1499	229	2375
Conscientious	16	35	36	31
Carefree	30	9	7	14
Total	100	100	100	100
Cases	647	1499	229	2375

Marked differences, however, occurred within the life cycle, where marital status (Table 3.9) combined with age to produce an effect which justifies the claim that this variable should be considered the most important among the sociological and demographic ones.[48]

Several annotations should be made at this point:

1. It is indeed possible to extract specific personality types from a number of survey questions. The QED that still remains open now is a display of the explanatory power of such types in the prediction of behaviour.
2. Social and demographic influences do not differentiate impressively our dependent variables, i.e. character traits and savings attitudes.
3. These observations represent two important pointers for us in our search for the 'specifiable conditions' of the monetary system.

We shall consequently continue to maintain that the disposition *towards* money shapes the disposition *of* money. Our next task then is to search for actual monetary decisions for differences between the psychological types. As we shall see presently, this job will have to be shelved for a while, because another consideration enters into our line of thought.

The ways in which attitudinal differences might bear upon monetary decisions had been indicated by J.M. Keynes with his concept of liquidity preference, though his interpretation of the phenomenon as a function of the interest rate and the income, business, precautionary and speculative motives[49] deserves further investigation. While referring monetary behaviour into the realm of motives and psychology, these hypothetical categories assume a completely rational decision process and do not explain the causes for changes in monetary behaviour. But it is precisely these reasons that we need to know about. We also must realize that in a modern economy account money and its symbols increasingly displace traditional forms of cash. Consequently the Keynesian concept of liquidity preference must be extended to cover bank deposits,[50] but the question, of course, is: what qualitative changes do we encounter in the liquidity preference as the quantity of liquid means to which it refers is increased?

The question of whether people prefer to carry cash rather than chequebooks in their pockets, or the question of how much money settles at the bottom of a cheque account over time and remains there unused, and the question of how both these facts vary with age or income and with economic optimism and pessimism are not at all academic. No more academic anyhow than the discussion about the maximum credit capacity of the money market. For if the limit of credit extension indeed is

$$\Delta K_r = \Delta\ Z/(r + c(1 - r)),^{51}$$

then we do need some information about the coefficient c. It represents the amount of central bank money that is withdrawn from the banking sector during each phase of the credit expansion process. We also want to have some idea about the residuals in cheque accounts that remain untouched, for they represent the amount of surplus reserves upon which further credit extension by the banks is based. In other words, we are now turning to some specific manifestations of monetary behaviour as they appear in the banking sector.

(c) Monetary transactions habitualized

The principal question we raised concerned the extent to which various types of payment techniques enjoyed popularity among users. We expected differences simply on the grounds that patterns of money handling would vary with the degree of familiarity with the various forms of account money. Since cheque payments and credit cards are nowhere nearly as widely used in Germany as they are in the US, the distribution of account types is quite indicative of the payment habits.

We found that some type of passbook or current account was reported by 66 per cent of all households, which means that one-third of the households in Germany still handle money in the form of cash only. But even the two-thirds figure is not quite accurate, because only half of all respondents kept any sizeable amount in their accounts.

Among the savings accounts the savings bank pass was the most popular (40 per cent of all households), followed by the postal savings book (20 per cent),[52] and the commercial bank savings accounts (7 per cent). Savings banks also lead in the area of current accounts which were found in 17 per cent of the households, current accounts in commercial banks ranked second with 10 per cent and postal accounts last with 8 per cent. These figures add up to more than 100 per cent, because households may have several account types.

Of those families who do possess accounts, 20 per cent have a savings book, 45 per cent a current account and 26 per cent own both types. It soon became clear that each account type had its own 'profile' and so we tried to find out: who held how much in what type of an account?

As for the amounts, the picture looked like this:

29 per cent of all households with accounts reported no substantial deposits;
23 per cent had up to DM 500;
33 per cent held more than DM 1000;
8 per cent had more than DM 5000; and
2 per cent held more than DM 10,000 in their accounts.

These amounts are distributed quite differently among account types; the postal savings book is left with minimal sums only, current accounts generally contain small to medium sums and the amounts in savings accounts range from small to large. Also, bank saving usually registered higher amounts than savings bank passes and current accounts in commercial banks top the postal accounts.

As far as the people who have accounts are concerned, we found that accounts are more frequent among older people than among the young. But within this distribution we made an interesting observation: whereas savings passbooks can be found in all age groups, the current account dominates among the 30- to 50-year-olds and the postal current account in the young age group. This we took as an indication of a learning process whereby familiarity with the more mobile account types is inversely related to age. The influence of education would point in the same direction: savings accounts were frequent in households with medium-level education (*Mittlere Reife*) and the more mobile current account in families with college education (*Abitur*, university). Since the types of occupation or profession showed similar differentials, we are quite safe in assuming that age, education and professional exposure determine the degree of familiarity with various account types, and familiarity in turn shapes the paying habits.

To demonstrate the profile of the three account types a bit more clearly, we grouped the reasons for saving into three categories: consumptive saving (money to be spent soon), precautionary saving (reserves for cases of illness, accidents, repairs, etc.), and capital accumulation. The distribution is that shown in Table 3.10.

Quite clearly consumption motivates deposits in postal accounts. This is quite often, though not always, due to the fact that postal accounts are being used as traveller's cheque substitutes, since even in the most remote part of the country there is always a post office which will service the account. Interestingly enough the differences between savings and commercial banks are not large at all, which would seem to indicate that deposits in postal accounts represent an entirely different, i.e. more liquid, type of 'money' and one closer to consumption. To probe deeper into this relationship we offered a list of purposes for saving to our respondents, with the results given in Table 3.11.

Table 3.10 Reasons for saving, by account type (%)[a]

Purpose of account	*Postal savings account*	*Savings bank account*	*Bank account*
Consumptive saving	65	45	41
Precautionary saving	18	39	41
Capital accumulation	16	37	33

[a] Table title added by editors.

Table 3.11 Reasons for saving, by account type, in more detail (%)[a]

Purpose of account	*Postal savings account*	*Bank savings account*	*Savings bank account*	*Bank cheque account*	*Savings bank cheque account*
Current household expenditure	9	13	9	35	51
Consumptive saving	65	41	45	60	63
Precautionary saving	18	41	39	41	31
Capital accumulation	16	33	37	30	14
Total	108	128	130	166	159
Households having accounts	100	100	100	100	100

[a] Table title added by editors.

Table 3.12 Usual mode of payment, by account type (%)[a]

Payment method	*Postal cheque account*	*Savings bank cheque account*	*Bank cheque account*
By transfer order only	64	42	36
By transfer and cheque	19	28	36
By cheque only	8	14	19
In cash only	9	16	9

[a] Table title added by editors.

Again the consumptive character of the postal accounts is confirmed and it is also apparent that savings bank cheque accounts are even more mobile than commercial bank accounts.

Precisely on this point, i.e. mobility of account types, we asked the owners of cheque accounts whether they usually paid by transfer orders (account to account transfer, no cash), by cheque or in cash (results in Table 3.12).

Another interesting aspect in this area of account money is the barrier that still exists in Germany against pay cheques instead of wages being paid in cash:

		Households with family members in labour force (%)
Receive wage in cash		78
and keep money at home	68	
and put money temporarily in bank	10	
Receive pay cheques		22
		100

Civil servants, about half of the people in administrative jobs and about a fifth of the blue-collar workers, receive monthly pay cheques rather than cash. Of those who are being paid in cash a considerable proportion objected to the idea of pay cheques, i.e. 35 per cent of the white-collar and 53 per cent of the blue-collar workers. The reasons for this resistance which we subsequently uncovered turned out to be typical *ex-post* rationalizations and confirmed to us that the key element is simply the degree of familiarity with the 'cashless' forms of payment.

(d) Purchasing power versus value of money

If attitudes towards money do, as we were able to show, influence monetary behaviour, we can safely assume that similar relationships exist between people's opinions about the value of money and their reactions to value changes. As usual our first objective was to identify the possible attitude objects,[53] i.e. we wondered whether the development of prices or the image of the currency would serve as focal points for the attitudes towards the money value and possibly, too, for ensuing reactions to value deterioration.

The DIVO-Institute (Frankfurt) helped to solve this puzzle by showing that there are, in fact, two distinctly different objects of cognition and attitude formation. DIVO asked its respondents each year:

A. 'What would you think: in two years will the mark still have the same, a higher or a lower value?'
B: 'How do you expect prices to develop in the next 12 months? Would you say that they will in general rise or fall, or what?'

In April 1961, for example, the reactions to those questions were as follows:

The value of the mark will:			*Prices will:*
Fall	40	70	Rise
Rise	7	4	Fall
Stay the same	38	24	Stay the same
Do not know	15	2	Do not know
	100%	100%	

Seventy per cent of the population felt that prices would rise, but only 40 per cent drew from that the logical conclusion that the value of the mark would consequently have to fall. This means that we are confronted with two separate phenomena, price development and currency image. The opinion about prices is reflected as an attitude of confidence (or distrust) in the continuity of purchasing power and relies for its information on the development of prices, which can be experienced directly. The confidence in the stability of the monetary system, on the other hand, cannot possibly be based on personal experience, but rather represents an unreflected stereotype incorporating different attitudes towards the economic and political development.

In our 1959 survey we had tried to tap the price attitude with the following question: 'Suppose someone misplaces DM 20 and finds them again in ten years. Would you think he can buy as much with that money as he can buy today, or more, or less?' We then compared our results to those of DIVO in 1959:

September 1959 *In ten years 20 marks will buy:*		*June 1959* *Over the next 12 months prices will:*	
Less	55	Rise	52
Just as much, more, no answer	45	Stay the same, fall, don't know	48
	100%		100%

The answers are almost identical and both apparently reflect an attitude that is based on considerations of purchasing power and price development, though in this context it was quite significant to note that heads of households have a much keener eye on such developments than the average person.

That the monetary value would fall was expected by:

55% of all respondents	64% of heads of households
61% of all men	64% of all male heads of households
51% of all women	62% of all female heads of households

Yet another interesting observation was that, contrary to common belief, the actual experience with inflation does not influence the overall monetary scene in Germany to any noticeable degree. This rather surprising result may, however, be explained by the consideration that only people with savings had really been hurt by the inflation. Today only 20 per cent of all households in Germany have savings of more than DM 1000 and only of these may we expect, if they had been savers before the currency reform in 1948, that the experience has made them cautious and distrustful.

A certain influence on the confidence in the monetary system could be discerned by looking at the psychological disposition. People with a pessimistic tendency generally expected a deterioration of the currency. Extraverted persons were more often sceptical about the development of purchasing power than were the introverts, who in turn reacted much more sensitively to changes in interest rates. The trust in money is also influenced by education and profession; college and business people are more apt to be suspicious about price and currency developments.

We may now return to the original point, from which we deviated a while ago. To recall the problem at hand: our task was to demonstrate that psychological types as extracted from the survey indeed display different forms of monetary behaviour and therefore constitute explanatory and predictive tools. At the same time we may tie the results just discussed into the following considerations, since the choice of account type as well as the amounts held there are reflections of the liquidity preference. The precise question then is: how is this liquidity preference shaped?

Our assumption was that, in addition to individual psychological dispositions, monetary decisions are influenced both by expectations about the general economic climate and the stability of the currency as well as by attitudes towards the institutions of the given currency system. As these economic, institutional and psychological factors combine to produce a stream of decisions about amounts to be spent and saved, each economic unit (an individual, a household or a firm) is left with a certain amount of resources, the total sum of which constitutes his objective liquidity. Beyond this, though, units tend to develop a subjective notion about the limit to which they feel they could make additional means available, should the need for them arise (e.g. through credits or sales).[54]

> It is the whole liquidity position that is relevant to spending decisions, and our interest in the supply of money is due to its significance in the whole liquidity-picture. A decision to spend depends not simply on whether the would-be spender has cash or 'money in the bank', although the maximum liquidity is obviously the most favorable springboard. There is the alternative of raising funds whether by selling an asset or borrowing.[55]

The extent to which the conversion of subjective into objective liquidity is both possible and controlled represents the degree of effectiveness of any monetary authority.

> First, by bringing about a change in interest rates, the monetary authorities can induce a change in the incentive or purchase of capital goods and so cause a change in actual spending on labour and other means of production of those goods. . . . Secondly, the monetary authorities can bring about a change in the liquidity condition of financial institutions and of business firms and people generally, so

> that those wanting money to spend find it more (or less) difficult to get than it was before.[56]

The subjective notion of one's own financial mobility, naturally, is quite open to influences of optimism or pessimism, and is by this virtue a crucial link between economic decisions of individuals and economic mass phenomena. The concept of subjective liquidity thus represents an important juncture between psychology and economics.

For the individual, the notion of liquidity, subjective or objective, is in the majority of cases condensed into the simple problem of budgeting income and expenditures in response to Question 1. Twice as many people in our survey claimed to be very careful and economical in allocating their money than admitted to being rather casual in handling money matters.

Generosity went with extravagance, light-mindedness and untidiness; meticulous, consistent, thorough and austere people also stuck to careful planning of expenditures. Such differences between character traits became even more pronounced in the answers to Question 2 about the importance of saving. Only a sixth of all respondents professed to the carefree attitude of regarding thrift as non-essential. The majority, and here most prominently the thorough, the austere and the consistent, but also those who had admitted to be indecisive, easy-going and soft, opted for thrift as an essential quality.

The proverb drew twice as many 'ayes' than 'nays', but also thoughtful, responsible and punctual people joined the slight and untidy in arguing that safeguarding against bad times made little sense nowadays.[57]

To pinpoint the genuine savers still more precisely, the projection test (Question 6) was analysed in greater detail. Very thrifty ('think twice before spending a penny') were less than 10 per cent of all respondents, mostly those tending towards avarice, austerity and meticulousness. Five times as many men than women took the moderate position ('save within limits') and a substantial proportion refused to see any sense in the idea of saving. The latter answer, which incidentally was only slightly more frequent among men than women, was given predominantly by extravagant, easy-going and carefree characters but also by those who had confessed to be a bit vain, inconsistent and lazy or claimed to be efficient on their job. It would seem that the more the idea of thrift is translated into concrete terms of saving, the smaller will be the number of its supporters. To stress this point, our respondents were confronted with three hypothetical situations.

The first two (Questions 3 and 4) have already been reported; the third ran as follows:

> 'Suppose you watch a woman giving a boy from the neighborhood two sh. because he helped her carry a heavy shopping bag up several flights of stairs. Would you think that that is too much money or not too much?'

As could be expected, the penny-pinchers kept the purse strings tight in all three cases, while the extravagant were true to their type with equal consistency. But the more interesting observation are the coalitions which form around the extremes.

Thorough, austere and punctual people would also forgo the movie. Loners and shy types would wait two hours for the next bus, while the efficient, easy-going, the vain and the social types would call a cab. The majority feel that two sh. is too much for carrying the shopping bag and only the extravagant, erratic, shallow and vain opposed this view. Combining these single traits to psychological types again, the impression we had gained earlier about preference for, or aversion to, saving is confirmed. Twice as many of the easy-going than the punctilious type would see the movie despite the price of the balcony seats; the case is similar for the extraverted and the desultory versus the introverts and the orderly. This difference is even more pronounced in the conscientious–carefree dichotomy. Only a third of the conscientious type would see the film and a mere fifth would call the cab, while the carefree reacted in the exactly opposite manner.

Differences of this magnitude were not found in any of the other variables; neither income, age nor sex showed comparable variances. Occasionally income and age even collide as, for example, in the movie case, where higher income makes it easier to afford the expensive seats but higher age makes it easier to resist. Consequently these factors tend to neutralize each other in part; the differences in the psychological make-up, though, remain.

One might, however, argue that hypothetical situations, precisely formulated as they may be, are nevertheless still a different matter than actual, real-life decisions; only in these does the influence of demographic variables really come through. So we asked our respondents about their saving habits, starting with the question whether they had been able to put aside a little money during the last few months. The loophole answer 'That was impossible' was chosen by about half of those whose income was less than DM 500 per month. From the DM 800 a month bracket upwards this answer was given by 25 per cent only, which would indicate a clear influence of income. However, these differentials increased considerably when the psychological types were tested. Twice as many of the extravagant than of the thrifty type 'were not able' to save any money. Punctual, austere and efficient people also were among the savers, while the shallow, untidy and the inconsistent formed the majority among those who did not save.

Another question dealing with the regularity of savings deposits brought similar results. The efficient, consistent, punctual, self-disciplined and the responsible are overwhelmingly regular savers whereas occasional saving occurs in the other groups.

All in all, neither age nor income could outdo the personal traits and psychological types in predicting saving behaviour. A breakdown into income groups and types showed that the conscientious in the lower (DM 300–500 per month) as well as in the higher (DM 500 and over) income bracket saved twice as much as the carefree in the same income brackets, i.e. 10–12 per cent against 5–7 per cent of their respective incomes. Savings of DM 2000 and more occur twice as often among the conscientious than among the carefree; almost half of the latter possess no savings at all.[58]

These and other results of the study indicate quite forcefully that knowledge of 'objective' income data is by no means sufficient to evaluate the savings potential; only after ascertaining specific attitudes and expectations of individuals do any projection and forecast becomes feasible.

Feasibility given, the achievement of accuracy in predicting is yet another and quite complicated problem. When it comes to forecasting economic behaviour, the complex interaction patterns of socio-economic variables emerge as the main obstacle. We therefore decided to subject data on saving behaviour to a tree analysis, which has been developed as one methodological tool for ranking predictive factors according to their ability to reduce the variance in the dependent variable. Thus interdependencies among factors influencing economic behaviour can be traced.[59]

Our Cologne data not being in a processible form we fell back on SCF data[60] and ran a tree analysis on amounts saved as the dependent variable. The resulting tree (Figure 3.1) has been trimmed slightly so as to improve readability; only those branches containing attitudinal variables have been retained. Consequently, interpretation has to be rather conservative and it should also be kept in mind that the data used reflect a particular point in time. Any generalization for the United States would require more data points and a generalization beyond the US economy extensive international comparisons.

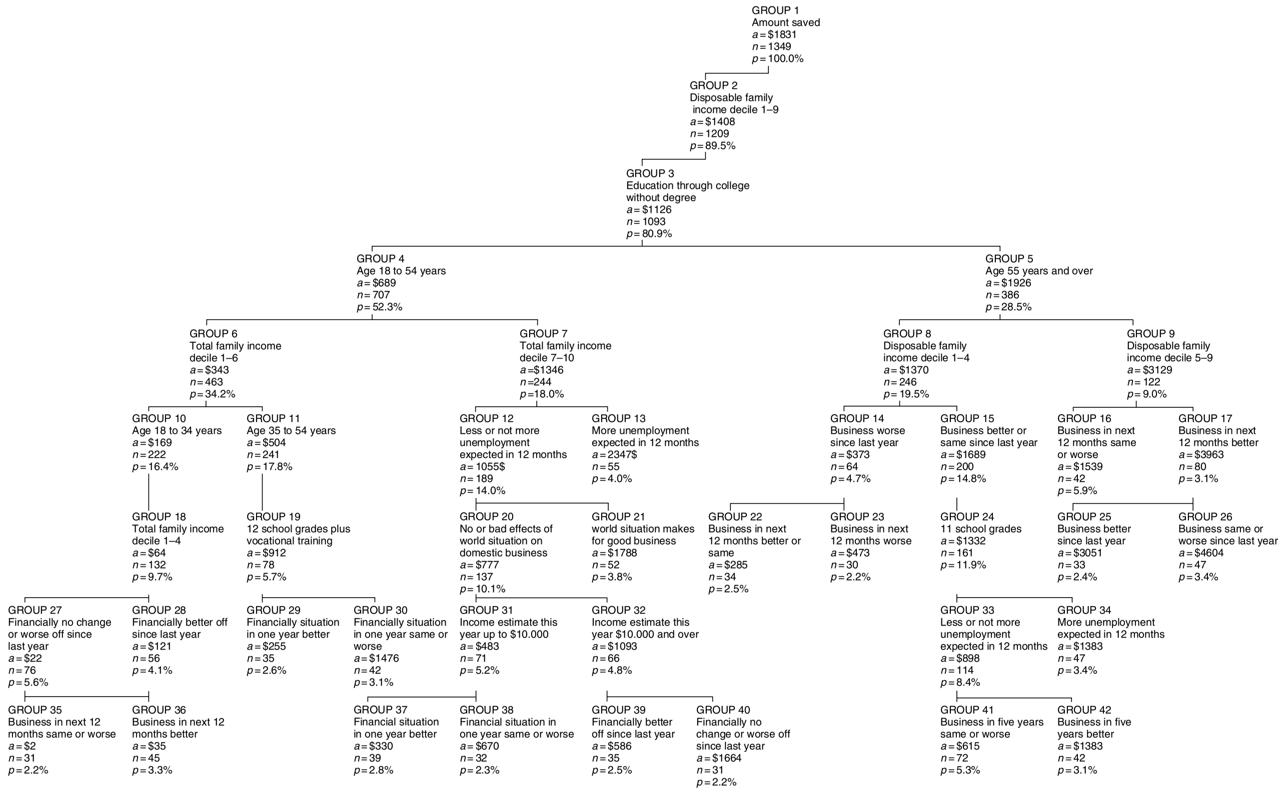

Figure 3.1 Factors influencing saving behaviour ('tree analysis')

Among the variables used by the program as predictors and reported in the graph are the following:

Financial situation vis-à-vis a year ago
Business situation vis-à-vis a year ago
Financial situation expected in one year
Business development expected over the next 12 months
Unemployment expected over the next 12 months
World political developments expected to influence domestic business

These will be referred to as attitudinal variables. Also included in the graph are:

Age
Education
Total family income decile
Disposable family income decile
Estimated income for the current year

Predictors that were used by the program but are not reported here include:

Good or bad news heard about business
Total family income bracket
Change in income vis-à-vis a year ago
Life cycle

On the other hand those variables not used at all by the program were:

Rising prices to the good or bad
Business situation expected as of one year from now
Good or bad time to buy household goods
Sex
Price developments expected over the next 12 months
Price developments expected over the next five years

In its arrangement the graph follows the usual procedure placing the split group with the higher average to the right. The letter 'a' indicates the average amount saved in the subgroup, 'n' refers to the number of cases in that group, and 'p' gives the percentage of the total sample that fell into the subgroup.

At first glance three interesting features emerge from the display. First, the education–income–age syndrome does indeed exert its influence as could be expected. Second, the attitudinal variables, whenever they enter, quite consistently split their parent group into people with optimistic attitudes and expectations versus those with indifferent or pessimistic points of view. Only in some of the splits are optimists and neutralists set off against pessimists. The point to be made here is that attitudinal variables apparently do exert a consistent influence upon saving behaviour so they could indeed contribute as predictors to accurate forecasting. The third feature is that the splits occurring in the attitudinal variables do not always tend in the same direction when the group averages are taken into account. Offhand one would expect the people tending towards optimism to be, on the average, better savers, as is the case in the groups (14/15), (16/17), (20/21), (27/28), (35/36) and (41/42). In several of the other groups, however, people with indifferent and pessimistic views appear as saving more.

Whether this is due to statistical reasons, i.e. the end groups having rather small numbers of cases, or whether it does reflect a systematic influence caused by the combination of different variables as the splitting progresses through the tree, we could not determine at this point. Though in some of these cases an explanation could be construed, the evidence is too scarce to volunteer any ad hoc hypothesis about the reasons for the directional differences.

The strong impression, however, remains that the knowledge about interaction patterns and the stability of their occurrence could well improve our ability to forecast saving behaviour, and this could easily be extended into other areas of economic behaviour. And, secondly, it seems that the particular technique of tree analysis is quite well suited to give better insights into the form of such interdependencies.

(e) 'Borrowing' versus 'Schuldenmachen'

In our attempt to obtain, among others, the temporal sequence of money dispositions our interest was not only in the save-first-buy-later scheme but also in the range of money borrowing. Especially we wondered whether it would be possible to get at the roots of the rather widespread resistance against borrowing money.

Even though it might be considered a task for a linguist to investigate the origins of certain 'loaded terms' used in economic life, the economist, if interested in behaviour and perception, may certainly take a first clue about specific attitudes from language, folklore or literature.[61] In this context we cannot bypass the fact that *Schuldenmachen* is by no means as neutral as the English term 'to take out a loan' or 'contracting a debt'. *Schuld* is both 'debt' and 'guilt', and this moralistic undertone is not lost in the economic context of *Schuldenmachen*.

It therefore came as no surprise that in a situation of monetary illiquidity no less than 80 per cent of our respondents preferred 'cutting down expenditure' to 'borrowing money from a friend'. Particularly the introverts and the punctilious virtually shied away from the idea, whereas a third of the extraverted and the easy-going had no objection to borrowing the money. The case was similar for the conscientious–carefree pair: ten times as many of the very conscientious type objected to the idea of a loan than accepted it, while 'to borrow or not to borrow' split the carefree group in two halves.

This strong aversion to the idea of *Schuldenmachen* is apparently carried over undiminished into practical life. Instalment purchases, in Germany much less widespread than in the United States, were reported by no more than 20 per cent of all households. Again, the very conscientious resisted the most whereas the carefree had contracted considerably more instalment debts than the conscientious.

In this case, however, demographic variables intervened to a more noticeable degree in addition to the psychological factors. While in the lower income brackets, i.e. among the younger people, the readiness to buy on instalment plans correlated significantly and in the expected fashion with the psychological types, the exact opposite was true for the income groups of DM 500 a month and more. Three times as many of the conscientious than of the carefree type dodged the prevailing taboo against instalments; a result which may well be due to the increasing tendency in the urban middle class to follow the American lead and accept instalment buying as a legitimate form of quasi-saving which allows them to overcome existing divergencies between rising consumption standards and present income.

With all due caution, if for purposes of record only, the results of a recent *Survey of Consumer Finances* about instalment buying and attitudes towards it may be quoted here. In 1965,

> the ratio of debt payments to income . . . was highest among those with \$3000 to \$5000 income. . . . Moreover, the overwhelming proportion of high debtors in this income group were young (under 35 years of age) and in a period of their life cycle when income rises . . . people with a rising income trend borrow more often than people with stable or declining income . . . among those who early in 1965 said they were making more money than a year ago, 60 per cent had instalment debts (against 38 per cent for those with no change and 45 per cent for those with declining incomes, G.S.), as against 49 per cent among all families. Among those who expected income

increases, the incidence of debt was 63 per cent (against 42 per cent for those who expected no change and 32 per cent for those who expected a decline, G.S.).[62]

Over and beyond all the differences between the two respective countries the interesting fact remains that young people (the carefree) are in the forefront of instalment buyers and that, partly because of the age differential, income expectations worked in the same direction in Germany and in the United States.

The same is true for attitudes towards instalments because 80 per cent of the 60 years and over group would rather cut down their purchasing than borrow money and 93 per cent reported no current instalment debt. The corresponding figures for the 16–29-year-olds are 59 and 40 per cent.

In the United States 'negative opinions about instalment buying were most frequent among older people and among those having no debt. The users of instalment credit were overwhelmingly in favor of what they were doing. . . . The primary explanation for satisfaction with instalment buying continued to be that it is the "right thing" to pay for large items while using them.'[63]

These results may well be an indication that attitudes towards *Schuldenmachen* are presently undergoing a change in Germany and may increasingly resemble those in the United States. Even though these figures by themselves may be considered insufficient to speak of a trend, we cannot overlook the existence of similar indications of learning processes with regard to paying habits.

3.2.4 Consequences for monetary theory and policy

It is obvious and inevitable that there will be far-reaching consequences for monetary theory developing from empirical research. In part, these have already been implied above inasmuch as the theoretical background for various parts of our survey was mentioned. Specific consequences, however, arise in three respects:

(a) A revision and gradual rewriting of monetary theory can hardly be avoided.
(b) Intensified research into attitudes and motives guiding monetary behaviour is called for.
(c) Appropriate research and analysis techniques must be developed.

Since the listing above is obviously reversed with respect to what comes first, let us give some consideration to the last two points: where to do research, and how to do it. It will be extremely difficult always to distinguish clearly between these two aspects, because quite naturally each subject of research at hand will usually require its specific research technique. The optimum, therefore, that we have to look for is the combination of a maximum number of meaningful hypotheses with a minimum number of analytical tools. As far as the first part of this combination is concerned, we may be sure that considerable effort will have to be spent on further exploration of the 'specifiable condition'. While attitudinal influences – as we found – constitute the main influence, the part of demographic factors as limiting conditions of behaviour should not be overlooked. As long as, for example, neither education nor professional experience have exposed a person to the various forms of bank accounts he cannot be expected to utilize such facilities. But this statement is not reversible; knowledge does not automatically lead people to avail themselves of accounts.

It is vital for monetary theory to know exactly in what way and to what extent those limiting conditions constrain monetary behaviour. If certain age–income combinations correlate highly with varying rates of saving, it is pointless to assume a constant savings rate for the entire population. Nor can the law of large numbers be adduced as an excuse here, because none of those variables need to be distributed normally. Monetary theory therefore must integrate both the attitudinal and demographic determinants of monetary decisions into a scheme of behaviour patterns. And it must at the same time contain information about the range of decisions that are primarily affected by attitudes, establishing those areas in which demographic circumstances intervene and modify the relevant behaviour.

Another group of the 'specifiable conditions' is best described as institutional constraints. These comprise construction, constitution, as well as incentives and sanctions of the monetary sector. Apparently no one seems to have noticed that a haughty bank palace elicits a different kind of behaviour from a corner savings bank. Nor do theoretical treatises indicate the fact that interest rates simply are not perceived by bank customers until they have a certain amount (in our case DM 2000) in their account. A similar result may be quoted from the 1966 *Survey of Consumer Finance*, where the knowledge about rising interest rates increased with rising income (see Table 3.13).

As all good theory leads to the formulation of executable policy statements, the consequences of our approach for monetary policy need to be mentioned in this context also. Obviously with the change in the theoretical framework that we have advocated here a change in monetary

Table 3.13 People's information about changes in interest rates by income (% distribution)

Have heard of higher interest rates	*Family income*					*All families*
	Less than $3000	*$3000–$4999*	*$5000–$7499*	*$7500–$9999*	*$10 000 or more*	
On mortgages	4	6	7	11	14	8
On other consumer borrowing	10	17	24	26	31	22
On savings accounts	18	28	26	27	30	26
On bonds	2	2	2	2	2	2
On business borrowing	3	2	–[a]	2	3	2
Uncertain on what	8	10	14	17	17	14
Have not heard of higher interest rates	63	50	44	38	28	44
Total	–[b]	–[b]	–[b]	–[b]	–[b]	–[b]
Number of cases	207	207	324	249	422	1434

[a] Less than 0.5%.
[b] Adds to more than 100 because respondents were allowed two mentions.
The question was: 'Do you happen to know whether there have been any *changes* during the last few months in the interest rate paid on savings, or in the interest paid by individuals or businesses when they borrow money? What kinds of changes?'
Source: G. Katona et al., *Survey of Consumer Finances*, Ann Arbor 1967, p. 197, table 9–3.

policy is also required. As one example of the shift in emphasis that should come about, the point of residual amounts in current accounts may be mentioned here in connection with pay cheques. If it is desirable as a policy aim to increase the efficiency of the monetary sector and/or to enlarge its credit-issuing capacity, the encouragement of pay cheques instead of cash payments would be the obvious answer. Empirical research can contribute a precise statement about the factors that will determine success or failure of the measure:

> to the degree that blue-collar workers can be induced to hold money in the form of check books rather than cash, and
>
> to the extent that they can be induced to participate in the cashless money traffic, the policy aim will be reached.[64]

Since we know that the readiness for both of these forms of behaviour depends on the exposure to cheque payments and on the familiarity with banking procedures, a corresponding educational campaign could guarantee success. We are, in other words, utilizing our knowledge about the learning process involved in this type of behaviour; a knowledge gained by observing the performance of money in its natural environment. To put it in a nutshell: monetary theory must be asked to describe monetary behaviour as it is, not as it should or could be under ideal circumstances.

There is, however, another group of consequences that follow from our study in particular and from empirical research in this area in general. Such research enables the policymakers to investigate the reasons for changes in monetary behaviour, i.e. the motives that guide the actions. As we have seen, survey research not only reveals in detail how people act and who follows particular behaviour patterns, but also allows us to get at the causes of such behaviour.

We cannot accept the philosophy that:

> even if consumer surveys are able to provide an accurate measure of the current state of consumer anticipations, it does not necessarily follow that they will also be able to explain the way in which anticipations are formed. But for making predictions it is unnecessary to decide whether anticipatory variables are in some sense basic determinants of consumer behavior, or whether they are themselves wholly predictable from purely objective (i.e. historical) factors like income levels, or past income change, and so on.[65]

The objections that we would raise are these:

(a) If surveys are capable of detecting anticipatory variables, i.e. expectations and intentions, that can be shown to correlate with subsequent behaviour, there is basically no reason to believe that factors explaining the formation of such variables cannot be found at the same time and by the same instrument. The question, however, is: should we look for them?

(b) Indeed, we should. It seems pointless to disregard the causes that lead to the formation of anticipatory variables on the grounds that the latter suffice to predict subsequent behaviour. We know in fact too little about this area of human behaviour to be sure that any expectations and intentions we are using will always reliably foreshadow an imminent change in behaviour. In order to test, in other words, the dependence of our anticipatory indicators we must extend our research into the area of attitude formation. It would be of little advantage if prediction could only indicate small deviations from a general and stable trend, but would fail completely in signalling an impending break in the development. This is especially important in economic behaviour where we are up against various forms of threshold phenomena; so far, we do not have sufficient information about their functioning. Where should we look, though? Can we indeed assume that anticipatory variables are themselves predictable from 'purely objective factors, like income levels or past rates of income change'?

(c) No. It would seem much more consistent with what we know about attitude formation to assume that 'subjective' factors have their share in shaping anticipatory variables. Not income change per se, but income changes in combination with certain psychological makeups will result in optimistic or pessimistic expectations and/or an increase or cutback in purchasing intentions. It would seem more likely that here, too, attitudes other than, but related to, those under study influence the formation of anticipations.

This field, however, probably represents, up to now, the largest number of unknowns in monetary theory, even though certain features have emerged. One of these revolves around the essential role of confidence in the monetary system, in monetary symbols, and in the stability of money value. It is often referred to simply as the attitude towards money, though this name is merely a proxy for a bundle of interdependent attitudes with different but closely related attitude objects. This subject is by no means new, the 'integrating quality of faith, without which hardly a coin, regardless of its precise standard weight and alloy, can perform its function'[66] has been debated for quite a while.

It is about time to make some precise statements about it, and preferably more constructive ones than Irving Fisher's irate tirades against the 'money illusion'.[67]

Again, we cannot expect to find answers easily, but we have a few indications. Part of this belief that we circumscribe as confidence in the monetary system, certainly affects the reputation of a currency. We have seen examples of this in the reactions to the DIVO question. Surely this attitude also includes a goodly portion of confidence and trust in the given political system into which the monetary system is intricately woven.

People are indeed willing to accept some rise in prices without transforming this expectation into an immediate repudiation of the currency. This, of course, is money illusion par excellence; an empirical document confirming Mr Fisher's hypothesis about the existence of such a phenomenon. And, to continue hypothesizing, let me suggest that money illusion acts as a vital safety mechanism for any monetary system and its currency. What might happen, we may ask, if everybody were to repudiate the current currency to the degree to which they expected prices to rise? In our study, for example, more than half of our respondents expected an increase in the price level; the SCF studies have rarely found less than 70 per cent of their interviewees expecting continued price rises in recent years.[68] Further research might well discover that the reputation of a currency furnishes, at least temporarily, a buffer against the impact that rising prices would otherwise have on monetary behaviour. This would mean, though, that the money illusion is not at all 'God-given ignorance' and 'primitive superstition' but an indispensable component of our monetary system.

This confidence in the monetary system could easily become a rather important variable, permitting us to explain wide areas of monetary behaviour, especially such perplexing phenomena as the rapid increase in savings deposits in a period of rather stiff price rises.[69]

We know further that the money illusion cannot be stretched indefinitely. At a certain point, the buffer of trust in the political and monetary system ceases to be effective; repudiation of the established monetary symbol begins and other forms of money (cigarettes, carpets, jewels, paintings, etc.) appear. What we do not know is when and how this threshold is reached. This question was never put before us more clearly and urgently than during the great German inflation in which the principle 'A mark is a mark' was upheld despite fast rising prices until the very turbulent, final phase of depreciation in 1923.[70] It was precisely this principle that caused Mr Fisher's ill-tempered remark about 'a brain lodged behind the ear in which as a deeply rooted ingredient of the mental equipment the near ineradicable money illusion is anchored'.[71] But have not the rather questionable manoeuvres on international money markets in recent years shown quite convincingly what happens to a currency if the 'integrating quality of faith' is absent?

There is in fact hardly an area of monetary behaviour where the existence of faith is more essential and obvious than in international money transactions. No matter for what reasons, aesthetic, religious or psychological, gold became the prime money metal, the 'gold illusion' has been and still is very much alive. Even though domestic money traffic has been separated from gold in almost all countries, and has been thriving ever since, international money markets are still based on it. No exercise in rationalization, clever as it may be, can disguise the fact that the 'gilded edge' of international finance is not only anachronistic, but also purely irrational. The illusion is so strong that in recent years the demand for a 'return to gold' was voiced, and not from French quarters alone. The world monetary system and world trade were pushed to the brink of collapse in pursuit of this demand. It took domestic upheavals of revolutionary measure finally to puncture the gold illusion.

It is certainly a task of international monetary theory to dispel the myth of gold quickly and radically. But the necessary condition for this task is the acceptance of the fact that monetary behaviour, domestic or international, is based on beliefs, attitudes and motives. This condition is yet to be realized. Part of the problem in achieving this is the fact that research techniques are clearly still in an experimental stage. Great progress has undoubtedly been made by the works of G. Katona, Eva Mueller, J. Morgan, J. Tobin, Th. Juster, A. Okun and others. Yet the reproach that the computer is nothing but a giant-size desk calculator for social scientists is certainly not wholly unjustified. Many statistical concepts used today in survey analysis are hangovers from the days when small group behaviour and small samples were the order of the day. Survey research operates in totally different dimensions as far as volume of data is concerned. First, the number of interviews lies between 2000 and 3000 per survey. Second, the amount of individual characteristics per interviewee is usually extensive. Third, a frequency of semi-annual to quarterly surveys is highly desirable. This is necessary in order to avoid the interpretation of cross-sectional data as a time-series study, as, *faute de mieux*, we have to do more often at present than we would like to. Besides, while cross-sectional data give us 'an almost complete spectrum of possible differences in household circumstances as well as potentially unlimited numbers of observations',[72] they indicate nothing about changes over time. For a demonstration of the efficiency of time series based on survey data we recall Eva Mueller's articles. It would follow from this that we have to strive for a combination of time-series and cross-sectional data, and that means semi-annual to quarterly surveys.

The complexity of analysis due to the mere size of the data is further increased in Europe by considerations about the comparability and compatibility of various national survey series, for example within the Common Market or within EFTA.

The need for new analysis techniques is obvious and we may hope that it will force methodological problems into the focus of attention within the social sciences. The pattern to follow would seem to be as follows. The detection of interaction terms among both demographic and psychological variables through multivariate analysis is a first item on the list. Though already rather complex, this is by no means insurmountable nor is it more than a beginning. A second phase, then, is the interface of demographic and psychological variables plus their respective and mutual interaction in our attempt to explain and predict behaviour. This could well strain the capacity of our current statistical concepts to the limit of their applicability, which is set by their underlying mathematical assumptions. At the end of the process there will consequently have to be a number of demographic/psychological 'types' or 'groups' which adequately represent a given population at a given time.

The third stage then is simulation. The resulting types will have to be tested, on the basis of the information we have gained about them with respect to their past behaviour for their reactions vis-à-vis hypothetical future events. This phase, of course, already represents the transition from pure economic behaviour research to practical policymaking, reducing to an extent heretofore unknown the ambiguity and uncertainty about the outcome and side effects of policy measures; an ambiguity which up to now still allows room for much emotional debate unduly delaying any necessary steps to be taken. Fortunately, some successful steps have already been taken in this direction. A notable example is the Automatic Interaction Detector, developed by J. Morgan and J. Sonquist of the ISR, which utilizes the capacity of electronic data processing to make decisions according to given criteria.[73] Their method is to reduce stepwise the total variance of a dependent variable by such an independent predictor as can do this maximally at any given step. Additivity is relaxed by permitting any one predictor to perform more than once. The result is a consecutive splitting of the original parent group into subgroups each of which may again be split until either one of two criteria is reached, namely either a lower limit of cases per split group or a lower bound for the test value F which puts the quotient of explained/unexplained sum of squares within the area of statistical chance difference. The graphic presentation of the Automatic Interaction Detector resembles a tree with a trunk and branches; accordingly, the method is often referred to as tree analysis.

The final aim, at least for the time being, is certainly simulation. Already there are computer facilities available that allow processing simulation;[74] their basic concept would have to be adapted to social simulation problems, i.e. to be programmed to handle a vast amount of interdependent decision criteria. Though this task seems herculean, it is not at all impossible; monetary policy, thereby, could be put on much firmer ground than it rests on today.

3.3 Level of aspiration and consumption standard: some general findings

(*with Bernd Bievert*)*

This contribution analyses German data with respect to a problem which has occupied George Katona intensively: aspirations versus saturation in affluent society. In particular, we shall investigate the relations between equipment level, the level of aspirations, consumption standards (these terms to be explained below), and such explanatory variables as income, age and stage in the life cycle. Since we were not interested in the analysis of consumer interest in any single product, the 29 durable items included in our surveys were divided into classes and assigned weights corresponding approximately to the average price of each item and reflecting the ratio of estimated value among the different groups of goods. We limited ourselves to a weight which expressed the ratio of values among goods. As the objective of our surveys was not the explanation of demand for single durables or groups of durables, the use of such indices appeared all the more justified.

The *equipment level* was defined as the sum of durables available in the household, weighted according to their estimated value.[75] The *level of aspiration* was defined as the sum of weighted durables, the acquisition of which would realize the household's conception of an appropriate standard of living.[76] As the level of aspiration designates the gap between the actual and the desired level of consumption, a household's *standard of consumption* was defined as the sum of its level of consumption plus its level of aspiration.

If the two components of the standard of consumption – the level of aspiration and the equipment level – are considered separately, the finding emerges that the latter is correlated to income while the former is not. Ownership of durable goods increases progressively up to DM 900 monthly income and then continues to increase, although at a decreasing rate (Table 3.14). By contrast, the level of aspiration responds little to variations in income. The aspirations of households with an

* The authors are indebted to Miss Gisela Neuerburg for computer analysis of the data presented in this section. G. Neuerburg, Determinanten des Konsumstandards, Kölner Diplomarbeit, WS 1971/72.

Table 3.14 Consumption standard and income (in DM)[a]

Total net income of household (monthly)	*N*	*Equipment level*[b] *(a)*	*Level of aspiration*[b] *(b)*	*Consumption of standard*[b] *(a + b)*
0–599	305	488	299	718
600–699	201	594	301	896
700–899	488	768	305	1073
900–999	200	878	287	1166
1000–1499	267	1006	303	1309
1500 and more	133	1190	207	1397
All households	1594	785	279	1065

[a] The data are taken from a survey directed by the Forschungsstelle für empirische Sozialoekonomik, Cologue, 1969; they are based on a random sample representative of all households in the Federal Republic of Germany and West Berlin ($N = 1682$).
[b] 'Equipment level', 'level of aspiration' and 'consumption standard' show the averages of an index calculated from 29 durables presented to the interviewed households (see Appendix).

income under DM 600 are below average; and although the level of aspiration does increase slightly within the next income group (DM 700), further increases in income do not result in further increases in aspirations. Indeed, in the highest income bracket, a remarkable drop in the level of aspiration may be noted.

The factor of saturation represents a major problem in determining the relationship between income and demand. This saturation is expressed by a relatively flat curve of needed goods which in the highest income bracket may even turn in a negative direction. The point of saturation is reached much sooner with respect to the requirements of subsistence than to luxuries. The flat curve of the level of aspiration, expressed by our data, and the negative ratio of increase of the level of aspiration over DM 1500 income, point to tendencies which Morgan noted for the US as early as 1958: expenditure for 'consumer investment goods' at that time – contrary to previous times and to conditions in other countries at the same time – could be represented by an Engel curve; this suggests that in the US many durable goods had at that time already begun to be considered as necessities. Today, this explanation seems to be applicable to the Federal Republic of Germany: as incomes increase more and more, former luxuries are included in the purchase horizon of average households. At the same time the significance of these goods changes. They lose their character as 'luxuries' accessible only to people with higher incomes. These assumptions are supported by a general trend towards saturation observed by other authors (Katona et al., 1971).

In considering the relation between income and level of aspiration, we must not forget, however, that the level of aspiration was measured on the basis of a broad though limited choice of consumer goods. Inclusion of items representing a higher order of wants would probably weaken the negative tendency of the level of aspiration in the upper-income class. If new or additional goods or goals are offered to a household, it is possible to arouse new desires (Hörning, 1970, p. 151).

Regarding the list of goods included in our study, our findings indicated that 'rising' occupational status was linked to a rising equipment level (Tables 3.15 and 3.16). An interesting comparison of workers on one hand, with employees, civil servants and professionals on the other, revealed that a larger percentage of the former than of the latter owned refrigerators, washing machines, television sets, radio-phonographs and freezers, and an equally large percentage of both the former and of the latter owned a car, although the workers' average income was lower. Non-manual workers were found to prefer higher expenditures for furniture, typewriters and similar objects.

Hamilton (1965/66), using data from another study of the Forschungsstelle für empirische Sozialoekonomik (Research Centre in Empirical Economics) (Schmölders, 1969) has pointed out that there are still significant differences between the consumption levels of manual and non-manual occupational groups, and of the working class and middle class. He found that the consumption patterns of the best-paid workers corresponded to those of lower-paid workers rather than to those of middle-class groups with the same income. To Hamilton, it is

Table 3.15 Consumption standard (in DM) and occupational groups

Occupation of head of household[a]	*Monthly income (average)*	*Equipment level (a)*	*Level of aspiration (b)*	*Consumption standard (a + b)*	*N*
Group A	1399	1045	345	1400	240
Group B	1251	962	261	1224	194
Group C	976	861	335	1197	324
Group D_1	826	806	336	1142	382
Group D_2	732	677	346	1023	298

[a] Group A: Professionals, upper management and civil servants.
Group B: Self-employed, craftsmen.
Group C: Medium and lower employees and civil servants.
Group D_1: Skilled workers.
Group D_2: Unskilled workers.

Table 3.16 Consumption standard, occupational groups and income

	N	*Consumption standard*
Income up to DM 699		
Group A	23	937
Group B	25	1093
Group C	65	1090
Group D_1	96	948
Group D_2	39	953
Income DM 700–999		
Group A	58	1202
Group B	94	1189
Group C	184	1192
Group D_1	254	1145
Group D_2	171	1147
Income DM 1000 and more		
Group A	148	1466
Group B	70	1339
Group C	63	1289
Group D_1	27	1345
Group D_2	65	1347

a 'lack of incentives' on the part of the working class which determines the levelling of consumption patterns.

A comparison of the consumption standard of occupational groups indicated that workers did not differ significantly from people belonging to other occupational groups with similar income (Table 3.16). The differences were far greater among income groups than among occupational groups. Hamilton's findings have obviously changed in the course of the last decade in so far as differences in consumption between manual and non-manual occupations have become more equalized. As to the level of aspirations, the two occupational groups do not differ significantly from each other. More and more households are looking for a 'standard package' of goods; since wants can be 'learned', they arise or are created among the working class in an affluent society by the influence of mass communication media and contacts with the middle class.

The differences in the ownership of consumer goods which, according to our study, may be traced to differences in education appear to be small and could also be due to influences of income (Table 3.17). An exception are the households with *Abitur* (high school graduates) and higher education with an income of less than DM 700 who are less well provided with consumer goods than those with less formal education;

Table 3.17 Consumption standard (in DM) and education

Education	*Monthly income (net average)*	*Equipment level (a)*	*Level of aspiration (b)*	*Consumption standard (a + b)*	*N*
Elementary school	651	606	261	868	450
Apprenticeship	886	813	288	1101	886
College	1149	914	266	1180	251
University	1618	1045	323	1368	94

they have, however, very high levels of aspiration. Presumably this group is primarily made up of student families whose long-term income expectations are high and thus lead to a high level of aspiration. If one extends the level of aspiration from consumption aspirations for durable goods to the entire range of spending, it appears that individuals with a high school education report desires much more frequently (57 per cent) than those with secondary school (41 per cent) or elementary school education (with apprenticeship 35 per cent, without apprenticeship 30 per cent).

For all three status criteria (income, occupation, education) a similar tendency concerning the standard of consumption showed up at first glance: the higher the status of the group in each category, the higher the standard of consumption. However, since income obviously has a strong influence on the level of consumption, that one factor had to be eliminated before the effect of the other two factors could be seen. When that was done, it became clear that the level of consumption standard was primarily determined by income. This finding emphasizes the importance of the absolute level of income, if conceptions of an appropriate standard of living are to be transformed into actual consumption. The achieved equipment level showed substantial differences for each income class. Other studies in earlier years also failed to find any significant correlation of occupation and income with the frequency and size of demand for durable goods (Klein and Lansing, 1955/56).

The equipment level of households was found to be influenced by the stage of the life cycle. The introduction of the life-cycle concept into our studies of consumption and aspirations represents a transition from a static to a more dynamic approach. Though the data concerning the structure of a family are usually collected in cross-sectional studies, they may also be used in a longitudinal analysis so as to represent the behaviour of the same group of households during the complete family life cycle (Schmucker, 1956, p. 2).

Influences of the life cycle can be observed both in the areas of earning and of spending. For our purposes, we broke down the individual stages of life as follows:

1st phase: Young people, no children (average income of husband DM 837; total family income DM 1137).
2nd phase: Young family, children under six years (DM 1034/DM 1111).
3rd phase: Normal family, children over six years, living with their parents (DM 1005/DM 1085).
4th phase: Adult family, three adults and more (DM 931/DM 1391).
5th phase: Older people, one or two adults, no children at home (DM 699/DM 835).

Changes in the life cycle are reflected in the standard of consumption (Table 3.18).[77] A parallel development between equipment level and income within the different phases of the life cycle can be stated very simply: the average income of the head of the household and the average level of ownership of durables are lower in the first and last phase than in the other phases; both reach their peak in the second phase. In most studies, differences in consumer behaviour are traced to income rather than to life cycle. Yet, if one breaks each stage of the life cycle into three income classes, the relationship between equipment level and stage of life still holds: young people and young families – regardless of income bracket – stand out as having a significantly higher level of ownership. The same result is reached if we break down the households according to age groups (Table 3.19). Families whose head is under 34 years of age are, in all income brackets, significantly better equipped than older households. If one takes into account the size of the household, the households composed of three or four persons generally reach the highest level of ownership; in households of five persons and more the possession of durable goods decreases (Table 3.20) (Ferber, 1955, p. 80).

Despite the above-average equipment of their households, young families are not at all satisfied with their situation. Their aspirations concerning standards of consumption far surpass those of older families; the levels of aspiration decline over the life cycle. This result is again independent of income. Breaking down the households into groups according to the age of the husband emphasizes even more strongly the

Table 3.18 Consumption standard (in DM) and life cycle

Life cycle	*Monthly income (net average)*	*Equipment level (a)*	*Level of aspiration (b)*	*Consumption standard (a+b)*	*N*
Young people	826	875	461	1336	93
Young family	1034	980	415	1395	288
Normal family	1005	865	322	1188	440
Adult family	931	835	241	1076	383
Older people	699	536	134	671	364

Table 3.19 Consumption standard (in DM) and age

Age of head of household	*Monthly income (net average)*	*Equipment level (a)*	*Level of aspiration (b)*	*Consumption standard (a+b)*	*N*
34	951	918	440	1359	372
35–44	1004	873	336	1209	398
45–54	975	824	271	1096	355
55 years and more	743	610	137	747	555

Table 3.20 Consumption standard (in DM) and size of household

Size of household	*Monthly income (net average)*	*Equipment level (a)*	*Level of aspiration (b)*	*Consumption standard (a+b)*	*N*
1–2 persons	722	583	213	796	595
3–4 persons	998	909	323	1233	750
5 and more persons	1004	875	301	1177	326

variations in the levels of aspiration. Within each income class there are significant differences between the several age groups: households with heads under 34 years of age have the highest level of aspiration. Considering the size of the households, those best equipped are those with the highest aspirations, thus with the highest *standard* of consumption.

A decline in the household's equipment, which starts in the third phase of the life cycle, is not completely overcome by the children's financial contribution in the fourth phase. Although the average income of the head of the household decreases, total income of the household reaches its highest level in this phase. Yet the contribution of working children to the household income seems not to be used for renewal or additions to the stock of consumer goods. People think rather of accumulating funds for the future households of their children, who will leave the parental household at the end of this phase. The desire to add to existing durable goods seems to be weak. The level of aspiration of the adult household falls under the overall average. A second indicator provided further evidence that these households were relatively more content: only 32 per cent of the households still had 'unfulfilled wishes' in the fourth phase of life cycle as compared to 45 per cent in the third, 47 per cent in the second, and 55 per cent in the first phase.

Older households no longer think of an expansion of their stock of consumer goods but rather strive to maintain its level. Their equipment and their aspirations are rather low as compared to younger households. Schelsky (1960) has said that in the 'area of consumption' the ideal of old age is an expansion of needs, although he goes on to admit that the old-age pension is a restrictive factor. Our findings contradict the former notion: purchases of new products and additions to equipment require a dynamic attitude which weakens with growing age, especially since old-age pensions are indeed very restrictive.

The standard of consumption and its determining factors were ascertained through a cross-section analysis. Basically, we can therefore only indicate trends with regard to the behaviour of younger, middle-aged and older families. There is no proof that the pattern of behaviour of the older group will repeat itself with those who are now young. One may rather assume that the level of aspiration of young households will never decrease to the level of today's pensioners. But neither can it be denied that there exists a group whose expansion of needs comes to a stop as a result of their age. In a certain measure, this conclusion retains its validity for every generation to come.

Our findings concerning the effects of age on consumption and aspirations run parallel to reports of the Gesellschaft für Konsumforschung (1953/62), analysing the demand structure for the years 1953 and 1962. In 1953, 81 per cent, and in 1962, 69 per cent of the households interviewed expressed intentions to buy; in the group of persons under 30 years of age, in 1953, 87 per cent, and, in 1962, 77 per cent had such intentions. The percentage decreased with increasing age. Among persons between 50 and 64 years of age in 1953, 81 per cent and, in 1962, 64 per cent still had intentions to buy; those over age 64, only 65 per cent in 1953, and in 1962 49 per cent had such intentions. These figures reveal not only distinct differences among the several groups at a certain period, but above all the extent of the changes that occurred between the two dates considered. Between 1953 and 1962, the average percentage of households with intentions to buy dropped by 12 percentage points. The reduction was most significant in groups which earlier contained a relatively small proportion of households willing to buy, and was smallest in those groups with the highest proportion of households willing to buy.

The rate of increase and decrease in equipment during different phases of the life cycle, which was observed by us for all households, varies but little among the different status groups, although it does appear that the higher the occupational status the later in life does the household equipment level reach its peak. This is probably related to the growth of income; top income and highest equipment level are reached in the same phase.

The size of the household plays an important role in the determination of the equipment level in households. Households consisting of three to four persons have considerably larger equipment levels than one- or two-person households (Table 3.20). But it is not sufficient to know the size of a household to determine a household's equipment level: younger households without children are better equipped with durables than older families whose children have already left. In this case, it is not the size of the household but rather the position in the life cycle which results in a certain level of consumption, in one case directed towards expansion, in the other case towards conservation.

Contrary to the conclusions which were reached by David (1961), who found the household's size played a greater role than the phase of the life cycle in determining the level of equipment, in our analysis the life cycle was found to be the better explaining variable (Lansing and Kish, 1957). The size of the household is important only in so far as it determines the increasing and decreasing level within the cycle, but not the absolute equipment level. The factor of age also has less influence than the life cycle on the level of consumption (Lansing and Kish, 1957). The size of the household contributes only little to the explanation of the level of aspiration, but the two factors, age and life cycle, show a closer connection with the level of aspiration. Life cycle is of eminent importance for the determination and explanation of the consumption standard, as it correlates positively – more than any other factor – with the equipment level as well as with the levels of aspiration. Among various attempts to prove that life cycle determines economic behaviour, only those were successful that did not eliminate income (Schrader, 1966, p. 55; Hörning, 1970, p. 121; Lydall, 1955, p. 149).

Our results, however, show that, even after the elimination of income effects, the strong influence of the life cycle still prevails. The different phases of the cycle should to an ever larger extent gain significance for the differentiation of the standard of consumption.

The influence of *attitudes* and *expectations* on short-run consumer behaviour in West Germany can no longer be denied (Biervert and Niessen, 1971). The influence on behaviour is apparent whether the expectations relate to the households' own financial situation or to the general economic trend. Optimists have not only a higher equipment level but also show higher aspirations and thus a higher consumption standard than pessimistic or indifferent households, though the differences are not very great (Table 3.21). Our findings in this respect clearly confirm those of Katona and his colleagues (1971).

A rather high percentage of households can usually be observed in surveys whose level of consumption seems to correspond to their idea of an appropriate standard of living. Asked about additional purchases of consumer goods, they do not report further wants, i.e. their level of

Table 3.21 Consumption standard and expectations regarding the general economic trend[a]

Expectations	*N*	*Equipment level (a)*	*Level of aspiration (b)*	*Consumption standard (a + b)*
Income up to DM 699				
Better	73	605	341	947
Same	292	530	265	796
Worse	53	580	230	810
Income DM 700–999				
Better	154	838	341	1179
Same	408	810	312	1122
Worse	55	746	204	951
Income DM 1000 and more				
Better	105	1137	281	1418
Same	235	1057	277	1334
Worse	32	988	269	1257

[a] The question was: 'Looking at the economic situation in the Federal Republic, will it be better, the same, or worse a year from now?'

aspiration drops to the value of zero. The following considerations come to mind:

- The theory of saturation, according to which the intensity of a want decreases with increasing satisfaction, maintains that the desire for further durable goods will continue to decrease as the equipment level continues to increase, until at the moment of absolute saturation, the consumer's felt needs have completely ceased to exist.[78]
- The theory of the level of aspirations, according to which aspirations depend on experiences of success or failure. In the area of consumption, success reveals itself in a high level, and failure in a low level of consumption – the level being judged according to earlier consumption levels, or according to levels achieved by other groups.

In our studies, households which had levels of aspiration for equipment below the average, also had low levels of achievement. Thus, the hypothesis concerning levels of aspiration was confirmed:

People with low achievement and little success reduce their aspirations or suppress them completely; 'saturation' in this case is the result of a high degree of resignation.

Levels of consumption are greatly influenced by success or failure in various spheres of life (income, education, occupation), as well as by personal characteristics regarding a person's dynamism required for implementing a high level of consumption.

Appendix to section 3.3 Durables selected for this research

Cars
Furniture
Colour TV
Washing machine
Dishwasher
Complete furniture for camping
Fitted carpet
Music cupboard
TV – black and white
Stereo, hi-fi
Freezer
Camera (more than DM 150)
Mangle
Couch
Electric sewing machine

Kitchen furniture
Sun chairs
Tape recorder
Bookcase
Electric or gas stove
Refrigerator
Radio
Car radio
Grill
Silver cutlery
Typewriter
Vacuum cleaner
Bicycle
Tea-cart

References (for section 3.3)

Biervert, B. and H.J. Niessen (1971). 'Consumer Attitudes and Purchase Plans – Consumer Surveys in the Federal Republic of Germany and Their Informational Value', Paper for the 10th CIRET conference, Brussels.

David, Martin H. (1961). *Family Composition and Consumption*, Amsterdam: North-Holland Publishing Company, p. 52.

Ferber, Robert (1955). 'Factors Influencing Durable Goods Purchases', in L.H. Clark (ed.), *Consumer Behavior*, vol. 2, New York: New York University Press.

Gesellschaft für Konsumforschung (1953/62). *Die Bedarfsstruktur im Käufermarkt*, Nuremberg, 1953; *Die Bedarfsstruktur*, Nuremberg, 1962.

Hamilton, R.F. (1965/66), 'Affluence and the Worker – the West German Case', *American Journal of Sociology*, 71, 144–52.

Hörning, K.H. (1970). *Ansätze zu einer Konsumsoziologie*, Freiburg.

Katona, George, B. Strümpel and E. Zahn (1971). *Aspirations and Affluence: Comparative Studies in Western Europe and the United States*, New York: McGraw-Hill.

Klein, L.R. and J.B. Lansing (1955/56). 'Decisions to Purchase Consumer Durable Goods', *Journal of Marketing*, 206, 109–32.

Lansing, J.B. and L. Kish (1957). 'The Family Life Cycle as an Independent Variable', *American Sociological Review*, 22, 512–19.

Lydall, H. (1955). 'Life Cycle in Income, Saving and Ownership', *Econometrica*, 23.

Schelsky, H. (1960). 'Die Bedeutung des Berufes in der modernen Gesellschaft', *Unser Verhältnis zur Arbeit*, Stuttgart, B.52.

Schmölders, Günter (1969). *Der Umgang mit Geld im privaten Haushalt*, Berlin: Duncker & Humblot.

Schmucker, H. (1956). *Der Lebenszyklus in Erwerbstätigkeit, Einkommensbildung und Einkommensverwendung, Allgemeines Statistisches Archiv*, no. 40.

Schrader, A. (1966). *Die soziale Bedeutung des Besitzes in der modernen Konsumgesellschaft*, Cologne/Opladen.

4
The Entrepreneur

Section 4.1 is translated from Günter Schmölders, *Verhaltensforschung im Wirtschaftsleben*, Reinbek bei Hamburg: Rowohlt, 1978 (Rowohlts deutsche Enzyklopädie 379), pp. 43–56.

Section 4.2 first appeared in Mark B. Winchester (ed.), *The International Essays for Business Decision Makers*, Vol. III. Published for the Center for International Business. Houston, Dallas, 1978.

4.1 Entrepreneurial behaviour

Previously economic science has concerned itself far too little and too superficially with the person and the role of the entrepreneur, and his significance to the course of the economy. J.A. Schumpeter referred to the 'sin of omission' of which conventional economic theory has been guilty for 200 years, this theory now paying the merciless penalty that is failure of state economic policy; handling of the entrepreneur problem was described by Schumpeter as 'not a glorious chapter in the annals of socio-economic analysis'. 'The theoreticians have almost managed to overlook this most colourful figure in contemporary economic life.'

In fact from the very start economic theory has not rightly known what to do with the entrepreneur. In the early days of industrial development, the problem of capital formation was to the fore; this was the axis around which classic business life turned and thus the entrepreneur disappeared behind his 'capital'. Another reason for this lay in the concept of the 'economy' as a closed ontosphere, governed by its own 'laws'. If, however, the economy performs according to 'laws', then the system cannot accommodate the factor of freedom of choice and freedom to act; it disappears in the face of the inevitability of the economic process. Directing the attention of economic theory and economic policy more towards the human factor in business life, to the living protagonists in its development, whom Adam Smith's moral philosophy would still have placed at the absolute centre of economic activity, also means simultaneously creating relationships with the course of this activity that are true to life, and that are also more enlightening for everyone than neo-classical theory has ever been; and the single most important protagonist in production and distribution, job creation and payment for work, recourse to savings and carrying out productive investment is, quite simply, the entrepreneur.

The fact that the respective *behaviour of the entrepreneur* is of decisive importance for the course of our market economy may in theory have been acknowledged by everyone since the time of J.A. Schumpeter, but the number of empirical studies of entrepreneurial behaviour in concrete economic and social situations has, however, remained very limited to date. The (at the very least) thoughtless assumption that entrepreneurial activity can simply be derived, without closer examination, from profit and loss accounting calculation data, prices, wages, the cost of carriage and materials, and interest rate charges should bear the blame for this in no small part, since entrepreneurs' behaviour is governed exclusively or largely from the point of view of one-dimensional 'maximizing of profits'.

It is indeed this basic hypothesis, from which all 'pure theory' proceeds, namely the hypothesis that the decisions of economically active people can be derived from their economically rational, reflected premises; in other words, the concept of *homo economicus* is not culled from reality, but 'pure theory'. An entrepreneur who searches for the place on the map – or on the globe! – where he wants to establish his production plant or found a company naturally ought in principle to have included any locations at all worthy of consideration in his decision and carefully weighed up the advantages and disadvantages of this choice of location (arithmetically). If one investigates the 'actuality', i.e. the behaviour of persons and groups involved in the decisions about a company's choice of location which apply in reality, then it is not possible to talk of either of these two 'self-evident' requisites; a survey conducted in 1970/71 by my Cologne Research Department for Empirical Socio-Economics about North Rhine-Westphalian industrial companies' choice of location for new start-ups and relocations between 1966 and 1971 showed, for example, that in almost half of the cases (46 per cent) only a single site, in one-fifth of cases (22 per cent) at least one of two alternatives, in 17 per cent of cases three and only in 14 per cent of cases four to six different locations were considered. Precise calculation of the site advantages and disadvantages for the locations considered was undertaken by a little over one-quarter of the entrepreneurs interviewed; more than 70 per cent did not think such an arithmetical comparison necessary.

It is not considerations, as 'pure' location theory assumed, of the costs of transporting raw materials and manufacturing supplies, as well as the finished products, that are decisive in the choice of an industrial location; during the period under investigation it was much more likely to be the availability of a sufficient quantity and quality of real estate and labour which determined the entrepreneurs' choice of location. Development of the transport system, whose scale could not have been predicted 60 years ago, surely contributed to this. In this regard too it is all the more important that socio-economic behaviour research correct 'pure theory' using reality.

If the choice of location alone is a very significant decision for each company, the same applies to the question of entrepreneurial investment decisions per se, so hotly debated today and, with regard to job creation, also fateful economically. In this case macroeconomic economic theory since J.M. Keynes without further ado 'banks' on a positive return on investments over the national rate of interest automatically triggering K. Wicksell's 'cumulative process upward', i.e. an investment boom and economic upturn, as the two interest rates' inverse relationship must trigger stagnation and decline. Socio-economic behaviour research was the first to prove over a wider basis that imputed earnings expectations represent only a single, and frequently not even the most significant, factor in an investment decision.

A recently published survey of the motivation for entrepreneurial investment decisions comes to the conclusion that at any rate it is not enough to explain such decisions as the logical end product of rationally applied considerations of profit or utility maximization;[1] if one makes the far from realistic assumption that investment decisions are taken in a vacuum, i.e. outside the social environment and corporate organization structure, then the hypothesis of *homo economicus* making objective, rational decisions in the sense of corporate objectives must be relinquished also. It is rather 'the decision maker's psychological structures and his ties to the social framework' that emerge, i.e. his individual objective functions:

> Together with the drive for self-preservation, roughly the equivalent of the intention within the company to earn profits, those vital needs come into play that derive their meaning from social contact, such as power, prestige, or from 'sharing', such as working in a group, creative

> enthusiasm, the need to perform. To man the company's activity is primarily directed towards, consciously or unconsciously, meeting these needs; depending on how his position in the organisation and his participation in decision-making are 'compensations' of a material and immaterial kind for his contributions, he will act according to the company's objective function, because then his needs find derivative satisfaction.[2]

My pupils H. Kreikebaum and G. Rinsche conducted an empirical investigation into this question of the importance of the prestige motive in consumption and investment,[3] in which 'demonstrative investments' up to notorious overcapacity and inappropriate investment are described using empirical material. The prestige motive has long been recognized as one of the factors which can be used to help explain where economic theory deviates from economic reality; much greater significance is attached now than a generation ago, as a determining factor in economic behaviour, to the desire for prestige in both consumption and in the field of production. G. Rinsche indicates uncertainty of status, as it exists in our 'anonymous society', as one of the social prerequisites for this development; he investigates the economic effects of the human need for admiration using empirical material and analyses the resulting changes in demand and market competition.

Even if it can be assumed normal in the field of production that such investments, which are largely prestige orientated, are still completely subject to the profitability calculation, H. Kreikebaum has in turn shown, using numerous examples, that it is not possible to neglect the prestige motive in investment theory either. D. Riesman had already referred to the sociological change in entrepreneurdom that makes it susceptible to an attempt to regard its firm's reputation as self-esteem and to carrying out 'demonstrative investments' for this purpose:

> Suddenly the 'fortune' is on the table, one joins an employers' association, turnover and profit fade into the background behind employment matters and social institutions, as is expected of any 'modern business'. A range of semi-intellectuals and academics move in: directors for the 'industrial relations department', for the company training department, for the human resources department. A works magazine appears, orders are placed with market research and company planning institutes, the buildings are modernised, or at least their façades . . . .[4]

But the demonstration effect not only makes its presence felt in such trivialities, but also in dangerous overreaching of abilities, as reported by E. Schmalenbach:

> Of the many successful entrepreneurs I have encountered in my life and with whom I have discussed their businesses, their plans and their dreams, I have scarcely known a single one who does not see a bigger business as the ideal . . . . Also those of my entrepreneurial friends who very well know how to make calculations, forgot to make calculations when they built their castles in the air.[5]

An empirical study by my Cologne Research Institute for Empirical Socio-Economics, carried out in 1971 with the assistance of the Stifterverband für die deutsche Wissenschaft, on the spending policy of German companies, addresses a similar question. Of the more than 400 companies surveyed between 1958 and 1970 only 19 (4.7 per cent) had not made any donations to scientific, charitable or other not-for-profit purposes; 307 companies succeeded in dividing their donations according to area, with social or charitable purposes being to the fore, science and education in second place, as well as 'miscellaneous' together with culture, which received greater consideration only from companies operating in the service sector. The bigger the size of company, the greater the preference for science and education, together with the social charitable purposes, for which the companies received the most requests for donations.

Broken down into sectors, companies in the chemicals, metal and electrical sectors lead the way in donating funds to promote science and education. In the process it proved that these sectors, particularly interested in the results of science and research measured by their depth of innovation, although particularly happy to donate to science and education, did so less because of their interest in the research results, but much more because of the subjective feeling of a certain 'dependency on science' in their sector, especially with regard to their need for scientifically qualified employees. Alongside this, the subjective feeling of the decision-maker plays a role, companies of a certain size being obliged, to a certain extent, to do something special for scientific, charitable and philanthropic purposes; in the process there is a subliminal contribution from the idea that promoting science is the best way to participate in the benefit resulting from the research results.

Although this idea is more likely to be part of subsequent justifications that psychology terms a 'rationalization' wherever possible of a completely differently motivated behaviour, companies' spending policy is an especially impressive barometer of the extent of their decision-makers' subjective perceptions of an obligation to act charitably. This can also be identified by the most frequent guideline for the value of donations given not being profits for the current financial year or the company's financial situation, but the level of donations for the previous year; more than half of those surveyed mentioned this benchmark first. Participation in the company's charitable duties is obviously regarded in wider economic circles as a *nobile officium*, which need not be made dependent upon the economic interplay.

That such 'imponderables' are not just of marginal importance to the companies, but indeed are central, is shown in another study. A behaviour theory concept of economic growth developed in my Cologne Research Institute, based on our own survey of 500 medium-sized companies in France, was used for comparison with medium-sized German companies, providing valuable conclusions about entrepreneurial behaviour, co-determined by the national character, in both countries.[6] While 27 per cent of those surveyed had already lost the will for entrepreneurial independence and for identification with typical middle-class values in Germany, or had it weakened so much that they were ready to relinquish their independence, according to the survey results in France the need for independence remains unbroken, at more than 80 per cent of medium-sized entrepreneurs, although the reasons that could move those surveyed to retain their independence on the one hand, and on the other to give it up, were the same in both countries. On the other hand this contrasting survey proved that only around half of French SMEs were receptive to technical and organizational innovations, while fully one-third preferred routine jobs and just as many rejected the idea of working more for a higher income. Likewise, in contrast to German self-employed entrepreneurs, the majority of French self-employed wanted to retire relatively early and place management of the company in younger hands.

If such clear differences, which result from a national character that is obviously completely different, come to light in international comparisons between wholly comparable professional groups, this once again only proves the great influence of personality characteristics on entrepreneurial decisions. According to these initial empirical findings from French material, entrepreneurs' receptiveness to technical and organizational innovations, largely co-determined by their standards of education, and their receptiveness to further training, and age, are of particular significance for medium-sized enterprises' contribution to economic growth. Success was attained predominantly by business proprietors aged below 45 with a high level of secondary education and receptiveness to further training, while age groups over 50 with less secondary education are characterized by a narrow planning horizon, dispensing with further training or expert tuition and a rather conservative attitude to technical advances, and the older age groups still (60 plus) are characterized by increasing professional dissatisfaction, which causes them to regard the role of entrepreneur as an increasing burden.

These findings were able to contradict, or at least put in their place, many hypotheses current in medium-sized policy. The slight success of tax breaks, provision of loans for medium-sized businesses and other business development measures, permission to cooperate (consultancy, etc.) can be explained by this in the same way as the much more marked readiness of the French to collaborate with competitors that is still lacking in the Federal Republic of Germany; conversely their minimal ability to adapt agilely to structural changes in the sector, which is better developed in the Germans. Decision-makers' character traits, which cannot be derived from mere statistical or macroeconomic considerations, are magnified here.

Viewed in an enlarged national and global economic framework, questions of location and investment decisions terminate in the general problem of economic development, a further textbook example of the need for behaviour research in business life. The fact that the problem of development cannot be resolved satisfactorily with a single discipline's concepts and tools alone may be readily acknowledged everywhere, but that in this case the economist is reliant on reciprocal exchange with the related human sciences, above all with sociology, psychology, anthropology and political science. There is little concrete idea, however, of how this collaboration can be accomplished and which approaches and methods from other disciplines could be used to explain and predict economic development.

An initial glance at the subject makes it clear that the problem exists on two completely different levels. A further gulf separates that part of the earth's population living in countries with a rapidly increasing population, but with a more or less stagnant economy, from that which enjoys constantly rising productivity and at the same time, an almost self-evident accompanying increase in prosperity. There is much to support the idea that this so-called North–South divide is growing steadily, i.e. that at the same time as the 'rich' are growing richer, the position of the 'poor' does not even improve in absolute terms, let alone relatively.

Almost no other political problem seems as difficult to solve as that of transforming a stagnating national economy into a developing one.

Where economic development is present, on the other hand, it seems almost to continue by developing its own momentum. The suspicion that the explanation for the historically rarer occurrence, i.e. transition from stagnation to economic development, is due to something completely different from interpretation of continually progressing development in the already 'developed' countries is justified by this close relationship between past and present development (and equally between past and present stagnation). Analysis of development's initial stage or 'take off' (Rostow) requires different ways and means than are needed for analysis of further development of a national economy already in motion. These two different development theory tasks must therefore be kept carefully separate; that mentioned first, especially aimed at the so-called developing countries, therefore must be kept to the forefront in the process, because theory had greatly neglected it before.

Classicists simply regarded economic development as a side effect of the self-evident further and higher development of man that, as such, forms part of the dogma of the age per se. Human requirements of this economic development have been assumed to be constant and equally present everywhere; countries outside Europe with their wealth of illustrative and substantiating material have been largely neglected in the process, especially since the overseas colonies were only regarded as a supplement to development of the European economy in question.

This train of thought, which can be followed down to today's development theory, shows a considerable 'ethnocentricity'; its scope of validity is restricted to the particular historical situation of nineteenth- and twentieth-century Western civilization. The development problems of the underdeveloped countries, with which the 'take off' theory is primarily concerned, differ in many respects from historical situations that were the force behind earlier approaches; the motivation to change economic behaviour, one of the primary conditions for any economic development, exists to a much lesser extent in the peoples of the underdeveloped countries today than in the European nations. In comparison with the 'spirit of acquisition' and the 'economic mindedness' (Sombart) of capitalism with its 'Protestant ethic' (M. Weber) based on rationalism and enlightenment, the cultures of today's underdeveloped societies intrinsically offer little in the way of incitement and reward for conversion of traditional productions methods and for economic expansion.

In particular the underdeveloped countries are of course lacking the broad foundation of private entrepreneurdom that served as the motor for economic development in Europe and North America. The private initiative that made a decisive contribution to development in the Western industrialized states has scarcely developed in most of today's developing countries, or not at all. It has brought about institutionalized technical progress with global expansion of Western methods of administration and organization, which J. Schumpeter called the real drive behind continued development.[7] Schumpeter thus pointed to an extra-economic development factor, which puts behaviour research right at the heart of growth and development theory. In his later work *Capitalism, Socialism and Democracy*, he offered an interesting analysis and prediction of the fate of capitalism; capitalism has not become dilapidated because something in its organizational substructure was not right, indeed this substructure has gained strength and stability in the last 80 years. W. Stark's response is:

> No, capitalism is condemned to death because mankind's attitude to it and to its values has changed. This is a clear case of ideas asserting themselves in world history with striking success; as mentioned above they have transformed the action modi and established institutions outside them which, like they themselves, proceed from the action modi.[8]

So what are the ways of behaving that can make a special contribution to economic development? If we disregard shifts in the ratio of economically active persons to total population, it is possible to achieve a per capita increase in production and demand only by an average extension of working hours or by an improvement in labour productivity or both. An unchanged number of economically active persons in an economy must either work longer, or more, or work with better technology. If one disregards times of war and crises, extra work as a component of economic development is much less important than working with better technology. This prerequisite for economic development is not necessarily linked to technical progress, i.e. to new inventions; since the present state of the art is available to practically every nation, but the latter exhibit considerably different standards of economic development, it can hardly be the differences in 'technical creativity' that are to be regarded as causative factors. It is related to a much greater extent to application of technology which for its part presupposes many a differing type of behaviour.

These ways of behaving are most easily observed in an agrarian society. A farmer is shown, or perhaps only believable representations made, that earlier or later sowing of seeds, for example, will increase his land's yield. If he decides to change his hereditary habits, then this displays a behaviour that, in conjunction with similar reactions on the part of other farmers in his country, as the case arises, may already contribute to a noticeable increase in overall productivity.

It becomes more difficult as soon as a change of location is needed. Successful application of a new cattle-rearing technique may necessitate the farmer giving up his village community and moving to the centre of his pasture land. Here the behaviour that leads to greater development in macroeconomic terms not only represents a change of working method, but also dislocation of families from their human or social environments. Recruiting a labour force from the rural population to develop an industry requires an even more radical change in living habits, comprising both a change of profession and change of location.

A further shift in traditional attitudes results from the distribution of labour and function necessary when building up an industry, which requires not only an inner readiness to change profession and/or location, but also the ability to exercise specific functions successfully. If it is not at all possible to transfer Western technology to underdeveloped countries by means of straightforward imitation, creatively gifted innovators are indispensable to the process of economic growth, even if it is only a question of application of innovations in production and sales and of developing new economic, political and social organizational forms. The social equivalent of economic division of labour is the formation of a status hierarchy which orientates itself according to the different levels of value in the production and distribution processes.

Every economic development thus requires a certain number of creative gifts for technical reasons alone; not just the quantity, but also the quality of the labour forces available in the so-called developing countries differs greatly from those encountered in the lands where technological innovations originate. Here most workers can read and write and furthermore they possess certain basic knowledge about the way machines work; in underdeveloped countries, on the other hand, the technical processes adopted from the West usually have to be adapted first to the circumstances of the workforce that consists predominantly of illiterates.

The new 'economics of education' speaks almost of a 'third production factor', in addition to capital and labour in this context;[9] the memorable image of the North American economy, abandoned by all the Americans one fine day and handed over to the Pakistanis, for example, vividly highlights the scale of this 'third factor'.[10] The economic rise, the onset of economic development, not only requires entrepreneurial abilities in the strictest sense, such as organizational talent, economic cunning and a realistic assessment of one's own abilities, but also a high degree of technical skill. The course of economic development is not only determined by those pioneers who implement 'new combinations'; the speed with which an otherwise already existing and proven technology is seized upon by entrepreneurs, and how difficult it is to apply, is equally important for the economic rise of a country.

Viewed from the field of behaviour research, the differences in the present and preceding stages of national development that are undeniably present can largely be ascribed to the inhabitants' specific behaviour, namely to the majority of the population's readiness to give up their hereditary working and living conditions in favour of more lucrative new ones, and to the presence of a skilled, adequately educated elite of (private) entrepreneurs or (state) organizations who are able to adapt the existing technical knowledge to the conditions prevailing in their companies and utilize it. It is by precisely these individual human qualities, not capital investment or *technical progress* alone, that economic development and advancement rise and fall.

Men's behaviour, attitudes and motives are, as W. Eucken realized some time ago, constant and changeable at the same time;[11] even old habits can be relinquished and many behavioural dispositions change under the influence of information and experience. It is not unusual for other attitudes, especially those that have already formed in early youth, to accompany the individual to his death; in this case a change can only take place with a change of generation, i.e. only over very long periods.

In addition to constancy it is conformity of behaviour that offers a starting point for explanation and prediction of economic development. Attitudes and motives that are called standards and values sociologically, and called traditions ethnologically, have a conforming effect on the behaviour of a large number of fellow men, or are the result of such conformity; they also tend to withstand the change of generation. Individual action does not take place in a social vacuum but, apart from an area of individual freedom of movement whose boundaries are also determined by society, by and large in the spotlight of our environment's role expectations. These 'roles' may restrict the individual's freedom of action, yet at the same time they contribute significantly to its stabilization and thus to its identifiability and predictability, through specification and standardization of the behaviour.

By analogy with the 'character' of an individual, consequently it is also possible to speak of a 'national character'. Just as the individual character effects a mainly constant motive for a person's lifetime, so are all the human behaviours that make up the national character generally long-lived; they survive changes and superficial transformations of the respective historical present, even if they are not immutable per se.[12]

In order to explain human behaviour as it relates fundamentally to an economy's development and economic progress, behaviour research must return to these attitudes and motivations. Anyone who wishes to explain the backwardness of a country by its inhabitants' lack of 'industriousness' provides little more than a tautology. At the same time he betrays with which of his own attitudes he approaches a declaration of fact which his attitude absolutely cannot explain. It is much more a question of identifying the alien attitudes and values that play a part over and above the motives and other behaviours. Because they all exhibit a certain stability, one can largely explain the behaviours influenced by them and predict them to a certain extent, by analysing them. Furthermore a society's institutions have an impact on economic behaviour; the households, companies and public corporations that often act as more or less homogeneous units – they too contribute decisively to an economy's development process or conversely to slowing it down or holding it back.

The history of economics is rich in examples of contact with economically advanced civilizations which, although they do convulse traditional cultures, to a certain extent certainly do not deliver a new motivational structure, without which no economic growth will flourish. Doubtless the striving for higher income is not the only motive for a change in economic behaviour, but the scale of incitements necessary for this is extremely varied. Numerous other incitements occur that facilitate conversion, such as a growing national sentiment or the desire for social improvement, which lead to competitive performance within a social or professional group, etc., in addition to the earnings motive which in turn tends to be fed by various other desires such as those for security, prestige or an improved standard of consumption. We still do not know enough about the conditions under which such motives spread to make general statements about the collaborative effect of civilization-based influences and traditions on the attitudes and motives that favour economic development or make it more difficult.

McClelland made a fascinating attempt at a quantitative analysis of the content of cultural traditions by investigating 21 children's stories selected as being representative of each of 40 different peoples, for the presence of the 'achievement' or success motive and comparing the index derived from this with the economic growth rate for every race.[13]

This resulted in a high level of correlation; the 'success motive' that is surely related to Veblen's 'instinct of workmanship' was defined in the process as the effort to render a performance without taking into account whether and how it is rewarded materially or not. This definition is obviously influenced by Max Weber's characterization of the Calvinist businessman who thinks little of his wealth except the irrational feeling that he has fulfilled his task well.[14] This is an initial attempt; it will be necessary also to include further motives and attitudes in the analysis, especially those that are directed at changing economic behaviour, in order to arrive at a catalogue of motivational factors.

A clear distinction must be drawn between this question and those on which the presence of an adequate number of capable entrepreneurs and organizers in an economy depends. A combined effect of individual character traits and sociological circumstances is part of bringing out such entrepreneurial personalities. E.E. Hagen sets out proof that the pacemakers in economic development neither seem to recruit equally from all layers, nor from the elite, the wealthy strata or the circle of those who have most access to foreign 'know-how' and foreign capital alone.[15] Instead they come proportionally frequently from groups whose members may have held a secure place in the social order in the past, but who had been withheld from the ranks of the ruling class to which they, in their opinion, were entitled. It is not individual emancipation from society's standards that make one predestined to entrepreneurial achievement, but membership of a 'slightly alienated minority' (Boulding) with certain attitudes and standards directed at material advancement; what Max Weber described as 'Protestant ethic' and the 'spirit of capitalism' was perhaps a just a special case within this set-up. It is not the individual psychological levels of explanation, but the sociological ones, which may offer the best starting point. So far little is known about the conditions for expanding entrepreneurial potential in a society. The conditions are certainly far more multilayered in this case than in the explanation of the population mass's change in behaviour; the prerequisite must be a far more specific motivational and attitude structure that not only strives for material gain, but gain for the purpose of productive investment, which aims not just for a unique, short-term change in lifestyle, but for a permanent creative shaping of new situations and long-term planning for the future, and much more.

There is much to be said for entrepreneurial talent forming separately from the main stream of cultural change; it obviously flourishes especially in certain subcultures and minorities which have a fate that diverges from that of society as a whole. In this case too, socio-economic behaviour research, especially research into entrepreneurial behaviour, provides plenty of scope.

4.2 The entrepreneur in the economy and in the society of the Federal Republic of Germany

The discussion on the role of the entrepreneur in the economy and in the society of Europe, in particular, has in the course of recent years been unexpectedly raised to an intense and indeed passionate level. The textbook's sober picture of the entrepreneur who, in hope of profits, has to organize the most expedient combination of the factors of production (the classical labour, land and capital) threatens, in the critical literature, to become again the capitalist 'exploiter' of early Marxian socialism. His economic and political power is to be destroyed so that society may secure social justice and equality for all.

The radical critics in their attack on the market economy tend to concentrate on the entrepreneur, whose claim to ownership and profit they regard as an irritating hangover from capitalism. Many moderate socialists also work on sociopolitical forms of organization and models that aim to dispense with both private ownership of the means of production and the role of the entrepreneur. There has been, certainly in Europe, a remarkable change in the 'pecking order' of society – that order in which members of a group are sanctioned to go to the trough in terms of behavioural research.

Whereas until recently the ranking of the entrepreneur close to the top went unchallenged, nowadays he is harassed by his antagonists on all sides, who seek to deny him altogether in order to obtain better provisions for themselves and their followers.

Under these circumstances it is highly relevant to re-evaluate the image and the role of the entrepreneur in the economic process and his consequential place in society. From a dispassionate position – unprejudiced by ideology and not prejudged by specialism – the task of satisfying the highly diversified needs of people for goods and services becomes a continuing process of bigger and smaller decisions on *alternatives*. These alternatives are posed by nature and by technology and choices are inescapable. Some mechanism, some person must make these decisions. In the socialist planned economy with all private property expropriated to become 'public ownership' and the entire economy 'socialized' in more or less democratic or less or more authoritarian fashion, the central committees of the planning authorities have to make decisions on investment and production. In the system of the market economy the entrepreneurs ideally endeavour independently and without privilege to make these decisions; and to make them as accurately, adequately and promptly as possible to survive against competition and keep their enterprises successfully in the market.

In both systems it is always imperative that the decisions give maximum consideration to information and anticipation of events. These 'entrepreneurial decisions' are largely the same for the socialist and the market economy. Viewed in this way, the entrepreneur of the Western economic system has as his counterpart the (anonymous) planning commission of Eastern European socialism. The commission cannot be freed from the entrepreneurial decisions by any party resolution or dictatorial ruling – even though such decisions be obscured in the opaque mystification of ideology.

In Western economies it is clearly a known entrepreneur or particular management of the enterprise, whose functions and actions can be most readily identified and traced. The totality of these individual, separate decisions achieves, firstly, that the economy's resources as a whole are utilized expediently and, secondly, that such utilization is indeed in accordance with a 'plan'.

The critical difference between the two systems is whether the steering of the decision planning is centralized or decentralized. Who controls and if needs be corrects the steering does, however, raise key questions about the cybernetic process. In the system of the market economy, the process of feedback informs and instructs entrepreneurial decisions and is in turn triggered by the instructing–informing decisions. The extended feedback effect takes place through the takeover by more informed competence of less informed incompetence, as failing entrepreneurs are compelled to release their decision authority over production-supplying capacity.

This is the familiar mechanism by which the market steers and is steered towards optimal or at least rational resource utilization in response to consumer interest and preference.

Nonetheless, the image of the entrepreneur with this key steering function is contemporaneously presented as a blurred confusion from conflicting standpoints. Who is it that makes the entrepreneurial decisions and how are these decisions arrived at? The dispute is also aggravated by how the general public forms its pictures of industrial tycoons, managers and bureaucrats.

What is evident is that our economic system presenting itself for more than two decades in Germany with the identity of a 'social market economy' remains essentially either unknown or misunderstood by a major part of the population.

The entrepreneurs are not themselves without blame for this situation. Patently they manage to sell most things better than they do themselves and their own image. Their economic and social function is either not recognized or little regarded. Ignorance begins with non-understanding of choice, though choice obviously permeates everybody's life – from which jam at breakfast, with whom to have breakfast, in what living accommodation and in which domicile. Every human action is always a choice between alternatives which the individual person finds more or less difficult according to nature and temperament. Since 'the necessity to act reaches further than the possibility to perceive', as Gehlen well puts it, life makes excessive demands on the individual in our complex times.

Even more exacting, however, are the decisions on resource allocations in our era of ever-rising expectations of Everyman. These are the crucial entrepreneurial choices – in socialist and in capitalist economies. In the centrally planned economy, the state planning commission fixes the proportion of consumer goods production within the planned national product and thus simultaneously decides on the standard of living of each citizen. In the Western capitalistic economies it is the private entrepreneur who reaches deeply into personal lives with his decisions on expansion, contraction, products and prices.

Furthermore, the dynamics of a decision between alternatives is not at all completed in the simple act of a concrete choice between options. In the eyes of the economist a decision presents itself as an extremely complex, multipersonal and multidimensional structured event that proceeds in several phases and finally culminates in the resolution – that is, the binding self-commitment to implementing action.

Indeed new approaches to decision theory tend to go further. In their definition of decision-making are included the realization of a resolution in the term 'decision', so that the decision is finally divided into two major phases – 'formation of will' and 'execution of will'. The 'formation of will' is, however, the real core of every decision since the resolution matures in it. It is here that the foundation is laid for its execution.

The process of making up one's mind that precedes any decision including the entrepreneurial decision, whether in the state planning commission or in the firm's board of directors, may come from consultation in which several decision-makers participate and act with corporate responsibility. Yet even these jointly arrived at decisions frequently bear the stamp of a dominating personality, who may not be the formal chairman of the group. Assumptions of rationality also need examination.

Economic theory has long assumed that entrepreneurs always exercise a maximum of rationality – that is, conscious, critically reflected action strictly in accordance with the rules of the optimization principle. This assumption of the objective rationality of entrepreneurial actions can, however, hardly remain unchallenged. In particular, decisions about the future necessarily lack the complete knowledge and anticipation of possible consequences that result from each choice. Since consequences are in the future, imagination has to replace the want of actual experience in their assessment.

Objective rationality would require a choice between *all* possible lines of evaluated action; in reality only a very few of all the possible alternatives are considered. Added to this is the limited human capacity to process information. In relation to the quantum of problems that would need to be solved for the realization of an objective and rational behaviour, such capacity is remarkably small.

In the centrally planned economy that has nationalized enterprise and eliminated every business concern for correct investment and production decisions, a staff of officials struggles with more luck than judgement to reach its bureaucratic but nevertheless entrepreneurial decisions. These officials may be talented, loyal, diligent and completely committed. Unlike, however, the market entrepreneur their viability is not personally dependent on the accuracy of their prognoses and decisions. Nor are they tied with all the threads of their consciousness to the 'business'.

Above all in the centrally administered and centrally planned economy, there is not a real, automatically functioning organ or mechanism of feedback. Wrong decisions on investment and allocation may possibly emerge only years after, when the length of customers' queues in front of the state-owned shops stretches unendingly. An authoritarian administration is also notoriously reluctant to accept complaints about supply deficiencies. This position is aggravated by the difficulties of establishing individual responsibility let alone accountability among the entrepreneurial bureaucrats.

Contemporary systems theory gives a central recognition to the cybernetic or feedback mechanism of automatic control, as explained above. Though the language is less technical, the history of the idea in economics goes back to Richard Cantillon. He first recognized and described the specific role of the entrepreneur in the market economy based on a division of labour; and he saw clearly the corrective signals of the market to the entrepreneur in his *Essai sur la nature du commerce en general*, published in 1775. Adam Smith, curiously enough, did not advance on Cantillon's perception. Karl Marx, paradoxically in the course of his accusations against the capitalist system, was acutely aware of the entrepreneurial role which led him to compare 'the capitalist on the production field' with the 'general on the battlefield'.

The socialist K. Rodbertus even described the entrepreneur as the holder of the public office whose task is 'to examine national requirements and to induce national production accordingly', and he accurately depicted the feedback function of the entrepreneur in the market economy. It is part of the tragedy of the non-Marxist theories of socialism that the teaching of Rodbertus remained without response. Adam Smith indeed, who failed to see the coming Industrial Revolution with its key contribution of the entrepreneurial innovative genius, condemned in his moral philosophy the 'projectors and prodigals' who started new branches of production, for which demand often enough arises 'not chiefly from use or necessity' but 'from fashion and fancy'. In his view they were speculators hoping for excessive profits and possibly prepared to pay higher interest rates than 'sober people'.

Jeremy Bentham in his open letter *Defence of Usury* turned against this puritanical view of his friend, Adam Smith. Bentham pointed to the uninterrupted progress of the general wealth in England and asked the question: to whom is this owed in the first instance? He emphasized that it was precisely the new 'projects' and their creators, attacked by Smith as 'projectors' and 'prodigals', who had presented England with this new wealth by managing 'to struggle through obstacles', developing new ideas and affecting progress and improvement in pursuance of their personal aspirations to make money.

This aspect of the process of economic innovation with its preconditions and consequences for the discovery of new markets, new needs, new methods of production and new outlets is taken further by Joseph Schumpeter, the Austrian-American economist, in his *Theory of Economic Development*. For Schumpeter the nature of the entrepreneurial function lies in the special role of leadership.

In Schumpeter's analysis the entrepreneur becomes the decisive 'motor of innovation'. As such, and as the pillar of economic and technological progress and therefore of economic development, the Schumpeterian entrepreneur truly forms a fourth factor of production alongside land, labour and capital. The consequential breakthrough in economic analysis does not limit itself to the discovery of abstract 'laws' of economics and quantitative mechanics but makes the behaviour of entrepreneurs and the formation of entrepreneurial decisions the central subject matter.

It is, however, an open question as to the extent and degree that contemporary entrepreneurs meet this special leadership role and serve as motors of innovation. Empirical research suggests that at least for Europe fulfilment of this function leaves a lot to be desired. In our Cologne Research Institute an investigation in 1966 on the contribution of small and medium-sized firms chose France for a survey that, *inter alia*, analysed entrepreneurial readiness to accept and carry out technical innovation. Results were very disappointing.

Only about a half (53 per cent) of the questioned entrepreneurs of small and medium-sized firms stated that they would frequently try out new methods; the rest more or less preferred the old 'proven' methods. It made little difference to which sector the individual entrepreneurs and their firms belonged. It does, however, seem to depend on type of education and size of firms. This suggests that the special leadership role is not inherent but rather that the entrepreneur himself has to be made aware through appropriate education including information. Beyond this, the entrepreneur is obviously only prepared actually to take on the role of innovator if the attached economic risk appears bearable, considering the size of his firm.

A further condition is likely to be that the entrepreneur concerned has to display a basic positive attitude towards risk; and he has to regard the entrepreneurial activity as an opportunity for self-fulfilment and as a worthwhile task. But he must not see risk as a pressing burden, as did about one-third of the French entrepreneurs questioned.

These results cannot simply be transferred to German business, but also the claim that in Germany the exact opposite is true, can hardly be substantiated. Spectacular single entrepreneurial innovations, as for instance the Wankel engine or the PAL colour TV system, are in themselves certainly not sufficient to provide the proof. In a very rapidly changing world, the long-term dynamics of the economy are decisively dependent on the special innovatory leadership role being generally fulfilled. Ideological dogmatism would seem to inhibit and prohibit any such role contribution in centrally planned systems, much as such systems may try to orientate themselves towards the market.

In Europe the denigration of, and smear campaign against, the entrepreneur comes, furthermore, in a period characterized by the erosion and disappearance of historically established values.

'As useless as the aristocracy' was the leading question the magazine *Capital* put to the historian Golo Mann; and in the same issue F.J. Straub was asked to comment on whether entrepreneurs, because of their flight from taxation, could be dubbed 'unpatriotic'. This kind of journalism seeks to make its own contribution to the already far advanced demolition of the 'myth' of the patriarchal, once prestigious entrepreneur. In his place in executing the feedback function of the market system is put the impersonal large enterprise with its anonymous executives or, worse, as presented in the mass media, as a naive non-comprehension.

It is no surprise, then, that at least in Europe 'the entrepreneurs' are made to feel insecure and are searching for a new identity. There is the danger that they may resign themselves to an increasing neglect of their still indispensable function, especially in the changed social pecking order. Instead they may prefer to enter into an unholy alliance with their natural opponents, the trade unions, to dilute and eliminate inconvenient competition – and thereby seriously endanger the market economy.

In this environment of ignorance and hostility, the entrepreneurs and their executives have still to fulfil their professional duties. In the back of their minds must be the sociopolitical function of the large enterprise as well as the daily operational task, pontificates a TV programme on the 'secret elite' in the West German economy. Entrepreneurs themselves, however, must share some responsibility for their vague and distorted public image. On the same programme as mentioned above, a Deutsche Bank spokesman said:

> The managers, including myself, share the blame. We do not do enough to inform the public of our work and responsibility as we see it. This is partly due to a traditional timidity and partly, strange as it may sound, to a hesitancy to push oneself into the forefront. We must have the courage to speak out in public about our work; we should also explain why our appearance is deceptive. Here is no clique for mutual promotion of assets but on the contrary, I would like openly to proclaim, a type of working elite.

To establish a climate of opinion favourable to entrepreneurship in the market economy is essential but not easy. Up to now in the German Federal Republic, and Europe generally, only those who condemn the system have succeeded in mobilizing a critical but hostile public evaluation. Their global accusations indeed have the more far-reaching objective of revolution. Yet election results prove that public opinion remains unpersuaded about revolutionary change. Among shareholders, investment advisers and investment clubs – where opinion-forming impulses may originate – there is the stirring of an informed critique. Even in such groups, however, there is a hesitancy to oppose determinedly autocratic management that is ultimately damaging to market entrepreneurship. Occasionally criticism may be openly expressed when dividend reductions are announced at annual general meetings, though even then there is concern for damage to the 'image' or the 'goodwill' of the enterprise that may in the long run engender as much loss of shareholders' interests as reduced dividends. The market economy needs a more informed justification.

In the United States there is a more sophisticated approach both to public relations and to corporate social responsibility. The search for new 'social indicators' alongside quantitative growth rates in GNP does yield concrete measures in place of image consciousness, as more and more American enterprises reorientate values towards the quality of life. There are lessons here for German enterprise and German entrepreneurs.

5
Psychology of Taxation and Public Finance

Section 5.1 'Fiscal psychology: a new branch of public finance' was first published in *National Tax Journal*, 12 (1959), pp. 340–5.

Sections 5.2 and 5.3 are translated from Günter Schmölders, *Finanzpolitik*, 3rd edn, Berlin, Heidelberg, New York: Springer, 1970, pp. 323–48.

Section 5.4 is translated from Günter Schmölders, *Das Irrationale in der öffentlichen Finanzwirtschaft: Probleme der Finanzpsychologie*, Hamburg: Rowohlt 1960 (Rowohlts deutsche Enzyklopädie 100), pp. 73–9.

Section 5.5 'Tax mentality in international comparison – an overview' was first published under the title 'Survey Research in Public Finance – a Behavioral Approach to Fiscal Theory' in *Public Finance*, 25 (1970), pp. 300–6. The last paragraph was turned into a footnote by the editors.

Section 5.6 'A theory of incentive taxation in the process of economic development' was first published in *Il Politico*, 31 (1966), pp. 788–800.

5.1 Fiscal psychology: a new branch of public finance*

I

Two important results of some 1958 surveys conducted in Germany under the auspices of the Cologne Centre of Empirical Economics Research in the new line of research on fiscal psychology are: (1) that fiscal policy, the idea of deficit spending in a depression and surplus hoarding in a boom, has hardly any chance of practical application

* Dr Schmölders is Professor of Public Finance at Cologne University, Germany. As early as 1932, he started research work on human behaviour under taxation; today he heads the Cologne Institute of Public Finance and the attached Centre of Empirical Economics Research.

because of the general lack of understanding among members of parliament and administrators of the underlying economic and monetary processes; and (2) that 'tax-dodging' is something quite unfamiliar to 90 per cent of the German population.

For the first time in history, a representative sample of a whole national parliament, the Deutsche Bundestag, was tested by modern methods of opinion research as to the economic knowledge of its members (67 interviews). In addition, all the members of its finance committee were also examined (27 interviews). At the same time, the attitude of the general public towards taxation was analysed in a modern survey investigation, carefully conducted by one of the leading public-opinion research institutes of Western Germany. Even this latter type of research, digging down deeply into the motivational and emotional layers of the mind of taxpayers and other citizens, seems to have no precedent in traditional public finance.

In the Old World, the roots of this new branch of public finance go back to the Machiavellian philosophy of public law. Working along these lines, some Italian authors developed, at the turn of the century, a political theory of government finance, based largely on highly cynical concepts of political and administrative power.[1] One of these authors, Amilcare Puviani, Professor of Law at the University of Perugia, even succeeded in writing a complete 'theory of fiscal illusions', in which he contrasted the illusions of taxpayers concerning the noble motives of their rulers with the illusions which the latter held about the loyal feeling of their subjects.[2] In simple hedonistic terms of satisfaction and dissafisfaction, Puviani described most of the phenomena modern fiscal psychology embraces. These include ways of camouflaging taxation under other names, or levying taxes under conditions under which the taxpayer is inclined to minimize or even fail to perceive any burden, e.g. death duties imposed upon heirs. Further, he dealt with the skilful misuse of noble feelings like patriotism, confidence and religious faith through the issue of public loans which later might not be repaid, or, if repaid, only in depreciated money. Taxpayers' reactions against such fiscal tyranny, including some comments on the social background of revolutions, were also systematically recorded by Puviani years before modern psychology or social psychology had been developed.

Italian Fascism and German Nazism, though broadening the field of experiences, did not permit scientific research along these lines. Only after the Second World War was it possible to recount such experiences and to formulate in terms and categories of modern psychology the conclusions drawn from Mussolini's fiscal measures and Dr Goebbels' propaganda.

It is hardly necessary to point out that many of the more traditional rules and principles of public finance are rooted in genuine, if primitive, knowledge of human behaviour. As early as 1728, Jonathan Swift had pointed to certain limits to the raising of customs duties on non-essentials.[3] Even Adam Smith's famous basic principles of taxation were meant to protect the taxpayer against fiscal arbitrariness and injustice. Smith, for some time a customs inspector, knew much about the weakness of human nature under the temptations of power. In the course of the nineteenth century, French public finance derived some general principles of budgeting from the same experience.[4] The principles of publicity, of completeness, specialization, and truthfulness in budgeting, for instance, are only so many mirrors reflecting suspicion of the integrity, good faith and fairness of an administration.

Even the economic effects of taxation in general, and of income taxation in particular, have been analysed in certain behavioural aspects by traditional public finance. The British economist, A. C. Pigou, developed his so-called 'tax announcement effects' by showing that taxpayers' reactions against a new tax quite logically start long before the tax is actually levied.[5] Fears of loss and expectations of possible profit are among the factors that lead businessmen to premature reactions from tax alterations, which have only been proposed or suggested.

It was only a small step from that development for modern fiscal psychology to penetrate more systematically into taxpayers' motivations and reactions. Resistance against, and evasion from, taxation were studied not only in the field of the income tax, but even in the area of excise, sales and outlay taxation and customs duties. For, even if taxation as such passes unnoticed by the final taxpayer, in so far as the tax is included in the price of the commodity, the elasticity of demand for the product becomes the decisive factor limiting its fiscal results. But what is elasticity of demand? It is, after all, nothing more than a psychic (or even physiological) measure of the urgency of wants.

The main task of fiscal psychology remains, however, to analyse the direct resistance to direct taxation of individuals and nations according to their general 'tax mentality'. Such tax mentality can be shown to differ widely between different peoples of Europe. Whereas, in the Latin world, the word 'tax' means something felt as an 'imposition' upon the citizens (*impôt, imposto, impuesto*), the German word, *Steuer*, means 'support' and the Scandinavian, *skat*, the common treasure destined for common purposes. On the basis of such different national tax mentalities, which are closely connected with the citizens' community-mindedness in general, individual tax-mindedness develops by personal experiences.

Confronted with the obligation to pay, the taxpayer feels inclined to a certain degree of resistance, leading to evasion, tax-dodging, or even to open revolt, like M. Poujade and his followers in France.

In order to measure the degree of individual resistance to direct taxation, two ways are open to the researcher depending upon his access to the individual cases. Measuring tax compliance means to assess, by voluntary cooperation of the taxpayers involved, the correct amount of their statutory tax obligation. Compared with the actual amount paid, a percentage of tax compliance can be determined. In the United States, some experimental research along these lines has been done by Harold M. Groves[6] and G.F. Break.[7] The compliance ratio of rent income (ratio of reported net rent to estimated net rent) varied, according to Grove's Wisconsin study, between 17 per cent (renter subletting) and 78 per cent (garages) with an average of 51 per cent. The compliance ratio of farm income was between 46 per cent (poultry and eggs) and 86 per cent (dairy products), and averaged 75 per cent. Non-compliance by farmers, however, seems to be greater than these figures reveal because of heavy overreporting of farm expenses deductible from reported income. For income other than rent and farm income, similar investigations remain to be carried out.

In most cases, this way will be closed to further research by lack of cooperation on the part of taxpayers or tax-dodgers. Then, the only other way of measuring the degree of negative compliance or tax resistance is to compose a true picture of the tax-mindedness of people by ascertaining its elements. There are certain relations between a person's community-mindedness, generosity in family, club or social matters, understanding of and cooperation in public affairs, and personal readiness to comply with the painful common obligations of a similar nature, such as taxpaying. Patterns of general tax mentality are discernible on the basis of neighbourhood, social class and profession to which the taxpayer belongs. In other words, the individual citizen or household can be enmeshed in a net of admissions that will add up to a true picture of his personality as a taxpayer. If this so-called projection test is applied, the victim can even be brought to confess his secret opinions on tax-dodging (by others!) and his personal feelings about tax-dodgers as social companions, business partners, or members of his family.

II

A survey concentrating on such a many-sided analysis was conducted, as mentioned above, in the early summer of 1958 in Germany.[8] The 'defendants', a large representative sample of citizens from all walks of life, were cross-examined by experienced interviewers regarding their general tax-mindedness, their moral assessment of tax-dodging and of fiscal administrators and tax officials. Through most of the interview, the person being questioned had no idea what it all was about. After admitting his viewpoint on the giving of gifts to others, on the assuming of responsibilities – by family members and more remote relatives, club members, room- and work-mates, or strangers, etc. – he was asked: 'Is, in your opinion, the so-called church tax really a tax? Or how would you prefer to define it?'[9]

Most people likened the church tax, which is levied in Germany together with the income tax and by the same authorities, more to a tax than to a voluntary contribution or a fee.

The interviewer could then turn inconspicuously from this question to some more on the difference between taxation and fees, and voluntary contributions. Tax-dodging was introduced in quite neutral terms: 'Are there many people, in your opinion, willing and able to keep the fiscal authorities from collecting something legally due them?' The person interviewed was asked to decide on one of two possible viewpoints on tax-dodging: Would he accept or reject a tax-dodger as his business partner, son-in-law or cashier?

Most people compared tax-dodgers neither with criminals nor with common-sense folks, but with clever businessmen. But tax-dodging was unfamiliar to most of them. For 90 per cent of the German population, income tax is withheld at the source together with social security taxes, church tax and other deductions. Only businessmen and the professions were held able and willing to dodge their taxes. These groups, in turn, blamed farmers (who actually are practically exempt), but could not help being caught on slippery ground themselves. Another investigation is planned to concentrate on these groups, whose representation in the general population sample naturally was not sufficient for exact conclusions.

III

Another hunting-ground for fiscal psychology is decision-making in parliament, particularly in matters of fiscal law and policy. While in the law field enough experts are at hand (many members have come from the bar or from high functions in administration), questions of fiscal policy do not find competent answers in the German Bundestag. This was proved by a survey concentrating on the unique experiment made involuntarily by the federal government during the years 1953–58 when a budget surplus was accompanied by a cash accumulation which was later dissipated.[10] Rearmament was planned and budgeted according to Germany's international obligations. But due to difficulties of a more technical nature (like time lags in building and deliberations about weapons) several billions of marks could not be expended in time. These formed the nucleus of a government hoard which accumulated every year up to a total amount of nearly 7 billion marks ($1.7 billion). In the business world, this accumulation of tax money was criticized quite openly. Some experts compared, somewhat misleadingly, the government hoard with the famous war treasure of the Bismarck Reich, deposited in an old tower of Spandau fortress called 'Juliusturm'. Even more criticism was directed at the Ministry of Finance, when, amid a business boom and under full employment, the hoard was dissolved and used for a host of new (and permanent!) expenditures. As the billions of government money had been kept in the Central Bank, their expenditure was nothing but creation of money or 'deficit spending' in the face of full employment and a general boom.

Very few, if any, of the members of parliament confronted with this somewhat complex problem passed the interviewers' examination on its monetary and economic background. Most answers disclosed very little knowledge or understanding of fiscal–monetary relations, the economic consequences of deficit spending in a boom, or even the difference between budget and cash expenditures. On the contrary, many of the respondents appeared eager to vote new and bigger expenditures according to a long list of priorities. When asked how they intended to cover such expenditures, the answer was mostly 'by cutting other budget items'. Logically, this would mean either the politicians' neglect or disapproval of former decisions of their own, or a strong preference for 'new' instead of 'old' functions of the government. Psychologically, it only betrays some of the laws of political thinking and decision-making. These laws seem to include a strong inclination towards impressive catchphrases and stereotypes as well as quite uniform reactions to some of the more emotional issues. The question whether there still exists real poverty in Germany to a considerable degree was mostly answered in the affirmative, notwithstanding a nearly unanimous approval of the catchphrase 'economic miracle', and the admission that even the little fellows had duly participated in it. Even the catchword 'Juliusturm' confirmed these laws of political thinking very convincingly. Everybody knew something about the Juliusturm and criticized its accumulation. Such criticism, in the minds of politicians, was bound to assume the form of approval for the hoard's immediate dissolution. Only one or two of the politicians interviewed had some doubts about the timing of the added expenditure. For the overwhelming majority, any such distant monetary and economic consequences of the creation of money in the midst of full employment seemed completely unworthy of consideration.

On the other hand, the practical impossibility of keeping a government cash surplus in the face of expenditure-prone politicians was conceded without hesitation. A very impressive slogan 'cash tickles desire', circulating during the year before, had done much to impress minds, even if not to alter decisions.

Political thinking, after all, follows quite different channels from economic fiscal–monetary thinking or thought. It is prone to suggestive catchphrases and mental contagion. It appreciates new ideas more than approved methods and emotional more than logical issues. It seems, therefore, of little use to confront our politicians with issues of such complex nature as the fiscal-policy programme. Such issues will have to be broken down into simple, elementary truths and impressive formulas of action before politicians are asked to decide on them. To develop such formulas or, at least, to hit upon plausible slogans will become one of the future tasks of public finance as well as economics. The new branch of fiscal psychology seems fit to help understanding and preparation for such a task.

IV

In the meantime, a number of other jobs wait to be done by fiscal psychologists. In France, where Henry Laufenburger has already included fiscal psychology in his standard textbook on public finance,[11] a new theory of economic thresholds has been developed by Professor Reynaud of Strasbourg.[12] Founded on fiscal experiences with tax resistance that starts only after a certain threshold of unnoticed taxation has been surpassed, an analogy is drawn even to currency depreciation. Not unlike taxation, creeping inflation remains more or less unnoticed by most people for quite a time – until a certain degree of money depreciation has taken place. Then suddenly a threshold of sensibility will be reached, when all become aware of rising prices everywhere. From here, close connections can be established with the late Albert Aftalion's psychological theory of foreign exchange rates pointing to some meta-economic factors of price formation in the foreign exchange markets. Psychological analysis can help in explaining many phenomena in economics as well as in public finance.

In its own field, fiscal psychology proper will have to analyse further the market conditions for public loans, the financial credit of public authorities, and to develop rules when to turn to loans instead of taxes and vice versa. The new instrument of moral persuasion, once restricted to central bank policy, has to be at the disposal of fiscal agencies as well. Besides, the whole area of the public relations of government as such, as distinct from the changing actors on the political scene, needs exploration in terms of social and individual psychology.

In order to learn from other peoples' experiences, international comparisons of tax mentality, inflation sensibility and similar psychic backgrounds of financial activities must be carried out.

5.2 Tax morale and tax resistance

In the centuries-old debates about taxation, many facets of the arguments reflect the experience that both for taxation in general and at the level of each individual tax, there is a quite specific upper limit in the form of its reasonableness, in psychological terms. The sense of justice of the person liable to pay tax triggers an understandable dislike of punitive rates of taxation for individual taxes as well as for the overall tax burden – though this response, admittedly, varies from age to age and from country to country.

The psychological threshold above which a further increase in tax rates is felt to be intolerable has therefore generally always been seen as something entirely subject to variation. In the nineteenth century, this limit was deemed to be reached at 10 per cent, roughly the equivalent of the ancient 'tithe' or 'tenth part';[13] in around 1900, P. Leroy-Beaulieu described a tax burden of 12–15 per cent of income as the upper limit of what was reasonable; J. Popitz thought that the psychological upper limit for taxation was one-third of income, and current [1960s, ed.] American public finance theory described 50 per cent and over as the 'psychological breaking point' – defining the point at which taxpayers still have the feeling that they are working to line their own pockets and not mainly for the benefit of the taxman. In the intervening period, income tax levels in the UK and in the USA have themselves been raised to peak rates of 90 per cent and above; and in the Federal Republic of Germany, too, the rate of income tax has risen progressively at times to close on 90 per cent, without triggering dramatic consequences.

To date, public finance theory has engaged relatively little with this noteworthy set of circumstances; in his pamphlet published in 1728, the Irish satirist Jonathan Swift used the example of the taxes on silk and wine to demonstrate that 'in the business of heavy impositions, two and two never make more than one'.[14] He attributed this phenomenon, familiar from as far back as the Middle Ages, mainly to the fact that high taxes encourage smuggling; later the same experience was generalized by David Hume and Adam Smith to all instances where consumption went down as taxation rose too high. Admittedly, in doing so they paid less attention to the 'instance of defrauding' so termed by W. Lotz, and more to the 'instance of the ability to pay being exhausted'. More recently, W. Gerloff has drawn attention to the 'law of growing tax resistance', albeit without going into the causes of this phenomenon in detail; he concludes that 'the boundaries set for taxation are not purely a "given", by the nature of the things themselves, but are grounded far more in human nature'.[15]

The basis of all successful taxation is, as mentioned earlier, a minimum degree of sense of citizenship and an intellectual commitment to the duties of citizenship on the part of those liable to pay tax. The general attitude to one's political community and to the sacrifices and common burdens which unavoidably develop from that for its members are encountered by the young citizen as already firmly entrenched in the world around him as he starts out in public life and on his career; the 'intellectual climate' under which the citizen sees through his engagement with taxation has been described by E. Grossmann as the 'tax ethos', by analogy with W. Sombart's term for the 'economic ethos'.[16] This term may well be wholly justified in describing the general attitude of voters to the system for public funding in Switzerland, a country which has a 'budget referendum' (the *Finanzreferendum*), but for the purpose of a more in-depth analysis of the different forms in which this 'tax ethos' is expressed it is recommended that the phenomenon be delimited both more accurately and more value-neutrally; instead of the taxation ethos, today the term we use is the general *tax mentality*, which differs from people to people and from age to age and describes the generally prevailing attitude to tax and taxation. The different tax mentality is already reflected in the semantics of the terms used to describe contributions to the state and for the state's various tax institutions; beyond that, it finds expression above all in the many peculiarities of these historic institutions as they have developed over time, especially in the tax systems and their individual ways of framing the tax laws. In the French-speaking parts of Switzerland, for example (as pointed out notably by E. Grossmann), integration with the German system of taxation on assets and income was a much more long-drawn-out process than was the case in the German-speaking parts of the country; when in 1934 the Swiss Federal legislature moved to request listings of securities and details of wages from its tax-paying citizens, in some of the French-speaking parts there was open outrage and actual acts of defiance.[17]

Even the referendum on a tax amnesty in 1964 again confirmed these differences in the tax mentalities of the French-speaking Swiss and the German-speaking groups in the population.[18]

A survey of the particular tax mentality of the Germans, especially their general attitude to the concept of taxes, has shown that the majority of the population prefer the comparatively neutral expression *etwas abgeben* ['hand a bit over'] to the word *beitragen* ['to contribute'], with its nuance of active involvement and free will, or even the expression *sich etwas wegnehmen lassen* ['to allow something to be taken off you'], which is permeated with a sense of an injustice being perpetrated. Despite taking a cautious approach in interpreting the results of the survey, it nevertheless reveals a number of insights into the general tax mentality; this becomes particularly apparent if the results are broken down by gender, age, education, career and social class of those interviewed. It shows that younger groups of people, with comparatively low incomes and still in the early stages of their career, are most inclined to the view that tax means that something is being 'taken away' from them; those people who rank higher for age, education and social class tend more to associate the notion of paying tax with 'contributing', whereas this association is least widespread among independent workers and professionals and for industrial and agricultural workers.[19]

In evaluating the results of this survey, it is of course essential to keep firmly in mind that each of these questions elicits affect-laden responses and simultaneously triggers affects; and it is certainly also the case that tax mentality, as expressed in the results of the survey, is inseparably linked with many other attitudes, opinions and prejudices, in common with which it changes over the course of time. In general, however, one may state that such fundamental attitudes are comparatively deep-rooted and change only gradually; every innovation is regarded in broad circles of the population with a certain suspicion, while habituation helps to erode prejudices which were originally present.

At any rate, these results also give clear expression to the fact that the tax-paying citizen associates with tax in whatever form the notion of a 'burden'; and public finance theory has long devoted particular attention to this phenomenon of 'tax burden' in all its various forms and guises. The term 'tax burden' is initially and generally to be understood as the difference between the income which the taxpayer would have if he did not need to pay any taxes, and his actual disposable income, as reduced both by directly observable taxation and also by the 'hidden taxes' included in prices. A distinction is drawn between this 'objective' tax burden, which as a rule can easily be quantified, and the 'subjective' tax burden or the 'sense of imposition', in that the latter is also fed by the various impressions which the taxpayer has of the level of his tax burden, both with regard to his ability to pay and also in relation to other taxpayers (the 'relative sense of imposition'); the material circumstances in which he finds himself, his earnings capacity, his more or less accurate knowledge of the taxes to be paid over, his level of knowledge regarding the state, the Treasury, the tax authorities and taxes in general, his individual temperament and his personal experiences – all these components find resonance together in this sense of imposition. At the same time, the subjective assessment of the burden as perceived by the taxpayer varies markedly depending on the type of taxation; with those taxes which are directly observable, and especially with assessed taxes – the 'ability-to-pay taxes' tailored to the taxpayer's individual situation – the assessment is naturally expressed more strongly than for the anonymous 'market taxes'. In terms of tax policy, it has long been the case that the special advantage of a tax on turnover, as of most of the taxes on consumption and expenditure, lies in its relative 'imperceptibility'; while the taxpayer knows or at least suspects in most cases that the price of an item which he wishes to buy includes a percentage for tax, because the price and the tax are paid in a single action and in a single total amount, he is only required to overcome any inherent resistance towards paying for the item once. This inherent resistance towards handing over money may be an innate part of his economic behaviour, but under this arrangement it is overcome when he is facing the vendor rather than the tax man, and with the object of desire firmly in front of him. In other words, when making the purchase the buyer is generally not at all clearly aware of the fact of a tax being levied.[20]

Empirical studies have shown that in fact the strength of the sense of imposition is largely dependent on the *degree of perceptibility* of a tax; even though this sense of imposition undergoes certain distortions in respect of income tax, due to a certain ignorance of the objective tax burden and other subjective impressions, it is clearly of a different order from that generated by vague suspicions regarding the tax burden included in the prices of goods and services. Unlike the sense of imposition in respect of income tax, the latter barely changes depending on one's sense of citizenship or level of education. Apart from such information, however, the perception of taxation is also continually dependent on the desire to be informed and on the underlying, in part also emotional, forces. This means that the sense of imposition is being jointly determined by some imponderable elements, the most important of which are habituation and the closely associated notion of the appropriateness of the taxation.

With taxes on consumption, generally a sense of imposition is initially only generated among the circle of taxpayers, who to some extent are the 'fellow sharers' in the knowledge of this hidden taxation; they are entrusted with a 'task of collection', which depending on the elasticity of demand prevailing in their markets is easier or harder to comply with. Increases in taxes on consumption in a modern mass democracy often initially trigger major uproar, corresponding to this sense of imposition being activated; however, once the tax increase is seen through, this activation generally quickly subsides again. The greater the success in establishing an assured place for taxation in the institutional process mechanisms of modern economic life, the more the time factor works in favour of 'naturalizing' the tax and against the initial sense of imposition associated with it; this is one of the reasons for collecting taxes on consumption as far as possible at earlier stages in the process of production and trade, remote from the actual consumption. Indeed, the consequence of this is even to see approval for the single tax on energy[21] in a study of public finance psychology looking at the sense of tax imposition in France, where the device of using indirect taxation to avoid resistance as far as possible has always been a much-favoured approach. Admittedly, one might ask the question regarding the extent to which applying concealment tactics of this kind is compatible with the principle of integrating and making tax transparent for citizens. Applying this principle, it would seem desirable to demonstrate clearly to the critic that his many and weighty demands of the state must also be counterbalanced with appropriate payments; mere fiscal sleight of hand must possibly give way on this point to higher policy considerations relating to the state itself.[22]

The sense of imposition and an awareness of the tax burden actually levied also have a direct influence on the *tax morale* of the individual taxpayer; albeit that the underlying basis of that morality is firstly a general 'attitude', in this case the attitude of the taxpayer towards satisfying or not satisfying his tax obligations, in other words his 'tax discipline'. It finds its clearest expression in the moral assessment of tax offences by the taxpayer himself, as can be established through suitable questions. The term 'tax morale' in this operational sense thus sees the term 'morality' used no longer in the sense found in Kant (who counterposed 'morality', as a morally higher obligation, with mere 'legality'), but solely as an honest inner approval for the prevailing order of mores and laws, to the benefit of better satisfying the obligations imposed on the individual through his incorporation into a community. In the moral philosophy and psychology of the nineteenth century, this concept of morality was gradually replaced by that of socially acceptable behaviour and of ethics. The notion of morality is nevertheless proving to be indispensable, at least for the areas of human behaviour we are addressing here, and in particular to be sufficiently concrete to describe the phenomenon of tax discipline or of its opposite.

The academic treatment of tax morale and the issues associated with it has its place in political philosophy, the philosophy of law and in the psychology of public finance; starting from the Christian moral philosophy of the Middle Ages, it found its earlier high point with the awakening of the social conscience in the 'victim theory' of taxation, which raised the relationship between the citizen and the state over the obligation to pay tax practically to the level of heroism. For example, one might cite W. Vocke, who considered that the essence of tax (as a service by the citizen) was justified in the moral nature of the state, and wanted to accord the 'honourable title' of tax only to those direct contributions measured on the basis of one's ability to pay, which call for responsible participation in the process by the person being taxed; as he argues, 'from the viewpoint of history and of what is socially acceptable', tax evasion and tax deficiency, as breaches of a higher moral obligation than those generally applicable, would need to be punished not just as harshly, but even more stringently than any other form of deception in business life.[23]

This strict point of view, however, has not prevailed at all when it comes being enforced. Rather, today 'tax morale' ranks far lower in the public's opinion than general morality; breaches of the tax laws have long become just as 'socially acceptable' as being involved in the black market in the period before the currency reform in Germany. The best evidence demonstrating recognition of this particular, looser morality on tax is seen by I. Jastrow in the fact that the legislature cannot bring itself to classify tax deception under the general paragraphs on fraud in the German Penal Code; instead, a special law relating to fiscal offences had to be created which envisages far less harsh penalties for tax-dodging than for crimes of comparable scale perpetrated in the private sector.[24] Even today [in the 1960s, ed.], a custodial sentence remains wholly the exception rather than the rule in punishing tax offences, despite the law on tax penalties being tightened up in the meantime.

There are a number of causes underlying the existence of this special tax morale – an existence with which tax policy has needed to find some kind of accommodation, good or bad, all along the line.[25]

Psychologically, the compulsory character of the tax laws (imposing on the citizen a one-sided sacrifice with no quid pro quo) acts in the same way as the anonymity of the state, which gives rise to the idea that tax deficiency does not really hurt anyone since the tax evader does not believe that the state is out for revenge and does not fear that the state would act next time in just as dishonest a way as he himself does; admittedly, the bad experiences which the German taxpayer was forced to undergo through the state morality of the Third Reich has also contributed in its own way to an additional worsening of the tax morale. A further aspect is rooted in psychological causes. The losses which the taxpayer incurs through paying taxes, not just on his current income but, in some circumstances, also on the very body of his assets, is not at least made good through a corresponding increase in respect, popularity or social prestige, as is the case with some other unilateral payments; since the abolition and lack of replacement for the three-class electoral system (used in Prussia until 1918), there has no longer been a directly perceived link, as the taxpayer sees it, between his payment of tax and his social prestige together with the political weight attaching to his vote.

Tax morale is subject to many graduations and nuances, just like tax mentality, from country to country and from people to people.[26] On all sides, however, one can detect a more or less well-developed parallel between tax mentality and tax morale; with peoples whose individual members seem almost predestined through particular character traits to have a negative tax mentality, such as the Roma with their strong sense of individualism, or Asian peoples with their sceptical and cautious wait-and-see approach, one frequently also encounters a loose tax morale which finds expression mainly in a particularly lenient attitude to tax offences. It is not rare to find this phenomenon so developed that the taxpayer perceives cheating on the tax authorities as a kind of contest, like a sport played between equals, and starting from the primitive preconception (which can only be understood from the perspective of his own mindset) that otherwise the state will be cheating on him in turn. This ideology of 'tit for tat' is found especially in those countries which have lived for many centuries through foreign occupation, and where casting off the yoke of hated foreign taxes has been imbued across the generations with an aura of national heroism. The fact that the taxpayer's own, now independent state, remains dependent on taxing its citizens just as much as the former colonial power if it is to carry out its functions presents a challenge, for it is a notion which can only take hold in a process of education and realization extending over several generations.

In some countries, loose tax morale is also the result of the fact that these countries have only recently extended and amplified their systems of taxes on consumption and turnover, developed over many years, with newly introduced and mostly also relatively complicated taxes on persons or property. It is illuminating that this type of taxation, given its high level of visibility, necessarily triggers considerable negative reactions especially where it is introduced without any transitional phase; often it is perhaps just superficial convenience which causes the taxpayer to act in opposition to the requirements suddenly demanded of him (keeping accounts, wage slips, tax returns, etc.). On the other hand, one cannot always conclude, from evidence of high tax morale as may be found in any particular country, that there is perfect inner submissiveness on the part of citizens to the state's tax take; the often cited strong tax morale of the English,[27] the description of which particularly from the viewpoint of Italian observers is highly instructive, has as its cause not just a certain benevolent leniency on the part of the tax authorities, but also the wide variety of loopholes which the tax laws afford for the skilful taxpayer. Winston Churchill is attributed as having made the following observation on this point: 'Only a fool can fail to find the loopholes in English tax law';[28] similar opportunities exist for Austrian taxpayers in the fact that 'the often contradictory economic viewpoints of the broad coalition (which held from 1947–1966, and involved the right-wing ÖVP [Österreichische Volkspartei] and the socialist SPÖ) have been embodied in the Austrian tax laws in the form of unclear compromise arrangements which permit different interpretations'.[29]

The surveys conducted by Emnid on behalf of Cologne University's Public Finance Research Institute (Finanzwissenschaftliches Forschungsinstitut) in 1958 and 1963 provided some valuable findings with regard to the tax morale of German citizens.[30] The first observation was that within the Federal Republic of Germany as constituted at that time (i.e. pre-reunification) there were no noteworthy regional differences over tax morale, but there were strong differences between the individual career groups; prima facie, tax morale can be characterized as a 'group morality' differentiated by job/career, in view of the marked differences shown in the opinions given by people in different careers. By contrast, differences between income groups, age categories and religious affiliations, between populations living in different types of area, between asylum-seekers and native Germans, or between men and women, were either barely identifiable or could clearly be attributed to the 'career' factor.

The unusual importance which one's job or career has for one's attitude towards tax offences is also linked with the fact that the various professional groups experience taxation in very different ways; depending on whether individual taxpayers have the opportunity – by skilful application of the rules to some extent – of framing expenditures connected with their private day-to-day living in the form of business expenses which can then be offset when calculating taxable income, then in tax terms those concerned can be said to be living either on the sunny or the shady side of modern economic life.[31] This set of circumstances, which is very familiar among the general population, finds expression particularly in the fact that more than two-thirds of those interviewed considered the 'businessman/woman' category as indicating those people able to withhold tax from the state by providing false information, whereas 'blue-collar workers', 'white-collar workers and civil servants' were only considered to be potential tax-dodgers by a very small proportion of those interviewed. Furthermore, a fundamental characteristic in the attitude to tax offences can be found in the fact that the seriousness with which such offences are viewed increases as the individual's own opportunities to engage in (to a greater or lesser extent illegal) 'savings on tax' diminishes; conversely, those people who have such opportunities available to them are most inclined to play down the seriousness of such actions and thus, to some degree, to excuse the actions of their own professional group.

This pattern of behaviour is also highly evident in the attitude of taxpaying citizens towards the person of the tax-dodger and how he should be punished. It is shown that large groups of people do not view tax offences as criminal behaviour, but see them instead as a skilful trick pulled by clever businesspeople. The tax-dodger 'isn't really harming anyone', at least not in the way that the fraudster, the confidence-trickster, the thief or the traitor does; while people perhaps find his actions not particularly attractive, they can understand them. Even the tax authorities concede that this 'curious attitude' means that 'the estimation of someone as being a highly-respected citizen (a "gentleman") is not tarnished by tax evasion. Such people neither lose their worthiness for honours, nor their suitability for honorary positions either in representing their peers or in managing money.'[32] Accordingly, the judgement of those interviewed on the appropriate degree of punishment for tax-dodgers is generally highly lenient; more than one-third of those interviewed considered a financial penalty sufficient as the maximum penalty for tax crimes, with less than one-seventh calling for a custodial sentence. It should, however, be noted that blue-collar workers, white-collar workers and civil servants take a much harsher view of tax crimes than independent professionals and farmers.

One should stress here that while one can conclude with a high degree of probability that a lax morality on tax indicates correspondingly lax conduct over tax matters, a strict tax morale as expressed in one's general opinions unfortunately does not necessarily guarantee that discipline is exercised over tax matters at the point where decisions are made. This holds true particularly for those people for whom the mechanics of the tax system allow no noteworthy opportunities for tax evasion; it is uncertain whether their standards, apparently so strict, would resist the temptations to which they might be exposed under a different tax regime. On the other hand, the extreme counter-hypothesis – that the attitude to tax crimes is simply a question of 'opportunity' – also seems untenable. Equally, one cannot conclude that the sense of imposition alone determines the attitude to tax crimes, or even that the sense of imposition is itself simply a function of the opportunity for tax evasion. Rather, what is being observed here are interactions; thus, for example, good experiences which the taxpayer has made over tax generally have a positive influence on his attitude to the state, and thus on his tax mentality and tax morale, whereas a poorly developed sense of citizenship and a negative attitude to taxation go hand in hand with a lax morality on tax, especially where the population feels that the tax burden is high and 'unjust'.

In such a situation, a behaviour can easily be demonstrated which the public finance theorists like to describe using the term *tax resistance*; its roots lie in the reaction by the individual against the compulsion which taxation brings with it, and especially in the resentment felt against the sacrifice which it imposes on the person being taxed. To the psychologist engaging with this phenomenon,[33] payment of tax appears to be 'a payment which psychologically is largely without motivation', being the 'one-sided and rare image in terms of motivational psychology in that, when it comes to tax behaviour, apart from the inhibiting or negative force of resistance and the negative driving forces which emanate from the threat of a penalty, there is no motivationally effective positive factor which can be identified'.

In fact, psychological studies have demonstrated that the obligation to pay tax has little or nothing at all to do with the actual 'moral' instance of the personality as embodied in one's conscience; the call by the state to take one's obligation to pay tax seriously is aimed almost exclusively at rational thinking, at the individual's 'good will' as anchored to a greater or lesser degree in his ability to reason. By contrast, the mental antipathy to paying tax in all its forms is rooted in the individual's vital sphere, in his natural drives and tendencies, which are diametrically opposed to satisfying his obligation to pay tax and are arrayed with incomparably greater power; it is precisely the particular nature of taxes as a compulsory deduction without any entitlement to a quid pro quo which makes it an attack on one of the most powerful psychological tendencies in man, his need for esteem or his need for power, which takes precedence over the need for possession or acquisition. Thus where there is nothing to provide assistance to the individual's 'good will', in the form of a primitive fear of discovery or, for example, a religiously rooted positive attitude towards behaviour which increases the general good, taxpayers find themselves experiencing the greatest resistance internally against satisfying their tax obligations, regardless of how the taxes themselves might be structured and the amount at which they are levied.[34]

In its external forms of expression, tax resistance manifests itself in the totality of the counter-reactions which taxation triggers in those affected by it; this covers a variety of types of behaviour. The taxpayer can first attempt to avoid the set of circumstances giving rise to the tax obligation at all, in other words avoiding taxation in a legally permitted manner, with the result that the position where tax is levied never actually comes about. With regard to legal or 'passive' tax resistance, public finance theorists talk of the 'signal effects' of taxation;[35] the tax acts on the taxpayer as a signal, since it flags up for him the need to behave in such a way that the tax obligation is either wholly avoided or is reduced to a minimum from the outset. The simplest example of such an avoidance reaction is the mass purchase of semi-luxury goods, alcohol or tobacco when an increase in the tax on consumption is imminent, or forgoing the consumption or use of merchandise which is subject to high taxation; in each case, one is looking at a change in behaviour. This is evident in eighteenth-century France, for example, where to get around the tax on doors and windows houses with fewer doors and windows looking onto the street were built; as a further example, in today's Germany we see citizens arranging long-term savings deals in order to take advantage of the tax concessions provided for such schemes. A newspaper tax in nineteenth-century France levied on the number of pages resulted in the appearance of newspapers printed on a single, outsized sheet of paper; currently in Germany, enterprises are switching between being unincorporated and incorporated businesses and back again, depending on whether there are bigger advantages under income tax or corporation tax laws.

Unlawful or 'active' tax resistance, as has been seen in one or other form in every century going hand in hand with repeated increases in taxation, has always merited particular attention in the history of public finance; the acts of resistance triggered by heightened tensions and by tax structures felt to be unjust contributed not insignificantly to the decline of the Greek city-states, to the later demise of the Roman Empire and to the failure of Imperial power during the Middle Ages in Germany.[36] The Netherlands breaking away from Spanish rule, the Boston Tea Party with the subsequent Declaration of Independence in the United States, and the French Revolution all merit mention in this regard too; more recently, the tax strike movement by the 'Poujadistes' (who succeeded in gaining a considerable number of parliamentary seats in France in the 1956 elections) has proven itself to be both a symptom and also a further factor for the domestic weakening of the state structure. Examples of partial tax refusal and open revolt in Germany are provided by the protest by wine-growers at the Bernkastel tax office which resulted in the lifting of the tax on wine (*Reichsweinsteuer*) in 1926, and the Pomeranian farmers' movement of 1931 under the black flag.

For public finance policy, the aim is to avoid, pacify, or in the final analysis to defeat unlawful tax resistance; such unlawful tax resistance essentially presents itself in the form of *tax evasion*, with the term *smuggling* being reserved to describe the 'rule-breaking' associated with evading customs duties. While smuggling and evading customs duties continue to be shrouded in the popular mentality, particularly in border regions, with a romantic veil which is barely besmirched by the criminal culpability of such actions, tax evasion in the more narrow sense is considered a crime, even if in many cases as simply a mere peccadillo; German criminal law relating to tax differentiates here between tax evasion, tax receiving (evading duty on products or goods or smuggling), and tax deception (false accounting or failure to notify). One makes oneself culpable of tax evasion if, for oneself or for others, 'one obtains by devious means tax advantages which are not justified or one intentionally causes tax revenues to be reduced'; where no intent is involved but merely negligence, then the law uses the term *leichtfertige Steuerverkürzung* ('thoughtless reduction of tax'). For this offence, there is provision for a financial penalty of up to DM 100,000; for tax evasion, financial penalties of up to DM 5 million are envisaged, with prison sentences in addition in the worst instances. Attempting to evade tax, or aiding and abetting tax evasion, are punished in a manner similar to the actual act of tax evasion; this also applies if someone purchases or in other manner acquires, conceals, sells, etc. for their own advantage items on which they are aware that taxes are payable (tax receiving). The offence of tax deception is punishable by a financial penalty of up to DM 100,000 or with a prison sentence of up to two years; this covers instances where someone intentionally makes out false sales documents, or either posts amounts which should be carried in the accounts inaccurately or fails to report them at all, with a view to making it possible to reduce tax revenues.

Of course, we are forced to use estimates in appraising the scope of illegal tax evasion in the Federal Republic. However, no less an authority than Regierungsdirektor Dr Terstegen, a senior civil servant and an expert and practitioner with a wealth of experience, answered a question on this point at a 1957 conference in the Federal Criminal Police Offices in Wiesbaden as follows:

> If one were to count every criminally inaccurate tax return, it would be an easier question; one would only need to keep a little below the number of returns submitted. Practically all tax-payers calculating the basis for taxation themselves will, for example, draw the line more in favour of their private expenses than the law allows in assessing the divide between private and business expenditure. . . . The efforts to audit returns made in the Federal Republic involves tracking down taxes which have been evaded to a not inconsiderable degree. . . . For France, Laufenberger makes the assumption that 40% of taxes would not be paid. In Germany, it will be considerably less that this, but even just 10% of income tax and corporation tax, if withheld, would amount to (just on DM 5 billion) annually. All these considerations make it permissible to hold the view that even serious tax deficiencies are not uncommon.[37]

Finally, the considerable number of those cases where the taxpayer can make use of the more or less widely framed 'scope of discretion' which our tax laws afford the businessman in drawing up his balance sheet when compared with the person subject to wages tax can be said to lie on the boundary between legality and illegality. However, it is probably indisputably more likely that they will be ascribed to the illegal forms of expressing tax resistance. Today, in many instances tax resistance is not dependent on such blunt instruments as tax deception and fraud to achieve the objective of avoiding or reducing the tax burden. The more the tax authorities are reliant on the cooperation of the taxpayers themselves for the proper determination of their tax obligations, the greater the significance that the degree and orientation of their tax resistance have for the result of taxation; this holds true for all contributions which even to the smallest degree are dependent on information, accounts or other organizational collaboration provided by taxpayers – in other words, essentially for assessed income tax and corporation tax, sales and trade tax and, last but not least, for customs duties.

There is thus a major challenge in arranging the mechanics of taxation in a way which reduces to a minimum the number and significance of those cases where successful tax resistance in some form or other frustrates the objective of taxation to some extent. Nevertheless, it is barely possible to forgo attempts to improve and strengthen the tax morale of citizens in general. This aspiration is, however, opposed by considerable difficulties, which to some extent are located in the legal framework and in the arrangements in law regarding the tax structure. These would include the twin-track approach to criminal proceedings on tax which until recently was still permitted, even though the subject of much complaint both by the tax authorities themselves and by those professions involved in tax consultancy; tax crimes could be pursued using the criminal law both under administrative proceedings heard before the Penalties Board at the local tax office or under criminal proceedings before the ordinary courts, with the tax office largely being able to exercise its own judgement over transfer of the prosecution to the ordinary courts. The widely held opinion that tax-dodgers came off better under administrative proceedings has been confirmed beyond doubt in a recent empirical study for the Cologne area;[38] with the reorganization of the procedure for criminal proceedings on tax now in place, this inequality is set to disappear since all cases are to be heard in the ordinary courts (a situation much more in line with the principle of equality of treatment enshrined in the German Constitution).

To maintain a 'healthy' tax morale, there is a continuing need for positive measures to better adapt taxation to the sensitivities and prejudices of the taxpayer. One example from France demonstrates just how hard it can be for the state to implement such measures itself, even where they are of benefit to the taxpayer, once widespread scepticism has taken hold over anything to do with tax policy. In 1953, the French government announced an immediate 30 per cent drop in tax for the ordinary taxpayer, on condition that the income threshold for the taxes subject to deduction at source would be raised and the tax payment deadlines brought forward for three years, in order that following the tax reduction there was not too great a loss of tax; by increasing the income limit for deduction at source and raising the level of tax morale as a result of the tax reduction, the government was hoping that the end effect would in fact be higher tax revenues. The response from the public was wholly negative, however, despite the prospect of a tax reduction; whether because the population suspected a hidden trick on the part of the government behind the entire initiative, or whether people believed that after three years the tax reduction would be reversed in any case, the widespread *allergie fiscale* meant that this government project came to nothing.

Attempts to raise a reduced tax morale have frequently been made in other countries too. Generally, these involve a sharpening of the tax inspection and penalty arrangements, occasionally combined with an amnesty for past tax crimes. Mention could be made in this regard of the provision in Germany for *tätige Reue* ['active regret'] under self-accusation of tax evasion reported to one's local tax office, as set out in section 410 of the German Fiscal Code; anyone not at imminent risk of discovery who acknowledges misdemeanours committed in the past and pays the tax owing escapes without penalty.

The considerations which argue against all too frequent or all too generous application of this remedy are self-evident; each time it is used, honest taxpayers are strengthened in their impression that they were again one of the 'dumb ones' who paid up, while their smarter competitors were able to build up and expand their business on the back of the 'involuntary loan' advanced by the taxman. A limited number of tax laws, framed clearly and comprehensibly and implemented effectively, together with a firm hand from the state as it collects taxes and punishes misdemeanours, are in the long run the only effective medicine against the wasting disease afflicting tax morale; emergency laws, draconian threats of penalties or undignified incentives to promote honesty on tax (using bonuses which always lag behind the potential material advantage to be gained from tax deficiency) are certain only to spread this disease more widely.

5.3 Tax justice

Tax morale, and the tax resistance with which the mechanics of the tax system have to grapple, are both very closely linked to the postulate that there is justice in taxation; for centuries, public finance theorists have engaged with the problem of finding an objective criterion in the standard of fairness, whether in order to justify taxation in general (Thomas Aquinas) or to endorse its particular constitution (A. Wagner).[39] This ethically based postulate of justice was also clearly in the minds of the representatives of the 'romantic' and later the 'historical-ethical' schools of economic theory whenever they proffered opinions on the political questions of the day from the ivory tower of their knowledge of history and their subject, voicing their personal and often enough emotionally coloured or simply unconsidered viewpoint; seeing themselves as scientists, they were in no doubt that their opinion provided a scientific contribution to disputes which often enough raged at the seamier level of material interests or pure ignorance of the problems involved.

Since the debate about value judgements, this carefree approach has disappeared from national economics; 'a wall of self-imposed restriction' has been erected 'between academia and action'.[40] But public finance theory finds it less easy in this regard than economics to dispense with considerations of normative viewpoints in the field covered by their academic research; after all, unlike their economist colleagues, they were not only having to deal with the 'fairness of the exchange', the *justitia commutativa*, but above all with the authoritarian *justitia distributiva*, which cannot be left to the automatic workings and anonymity of the market.[41] Even with the greatest care not to risk mixing ethical and theoretical thinking, and even after the value judgement has been banished from economic theory, public finance theory must, as in the past, continue to debate the postulate of justice in taxation; after all, 'the fact that one also finds normative structures in the object of academic interest in no way [means to say] that the academic thinking which has these structures as its object must itself be normative in character or make value-judgements'.[42]

If one attempts to put into some order the wealth of notions of justice linked to different times and places with which public funding policy and thus also public finance theory has to engage, then initially it is difficult to separate the call for 'justice' which is often voiced only in pursuit of personal interests from the genuine concern for 'more justice'[43] in terms of tax policy. 'In the name of justice', the farmers' associations plead for tax exemptions and state subsidies for agriculture, as otherwise they would not have appropriate 'parity' with those employed in trade and commerce; in the name of that same justice, there are calls from the middle classes, from the national border areas and from the borders of the post-war zones of occupation, from the associations for war victims and those who have lost out over currency reforms, and from countless other groups, all demanding tax reliefs and a particular course to be set for collective wage agreements and tax rates. Some of these demands find approval in the general sense of what is fair and just; these are supported, whereas other calls are rejected as coming from self-centred interest groups. However, even where the notion of justice is abused in this way in the service of group interests, it still needs to be included by public finance theorists in their studies as part of the true reality on tax.

This is even more valid for that justice which is aspired to and demanded for its own sake, so to speak as an ideal. Where egotism presents itself as an injured sense of justice, this can be exposed; but elsewhere what is in play is in fact a notion of justice which is deeply rooted in innermost conviction, and which under some circumstances can perhaps be applied idealistically and progressively, even to the individual's own disadvantage. This means that one is dealing with a powerful factor in public opinion, and above all with the parliamentary formation of will, a factor which cannot be ignored by public finance theory if it intends to take account of the political–psychological aspects of public finance policy.

If one addresses in closer detail these notions of justice rooted in conviction and not just advanced hypocritically, then one soon realizes that they are based on *two different levels* and in quite different forms. On one level – the 'higher' level – one finds the justice of the rational mind, of conscience, and born of the knowledge of economic relationships – in other words, the notions of justice held by knowledgeable and responsible circles of people comprising well-informed public opinion. As an example, for many years cumulative all-stage gross turnover tax operated not in a manner which was neutral for competition but instead encouraged concentration, in that single-stage enterprises were discriminated against and at the same time significantly hindered over exports. The fact of this could not be effectively explained even to those small- and medium-sized companies forming the directly affected groups; but in the interest of a higher rational 'justice', recognition of the need to change the system to a VAT-based approach has now taken hold. Those better-informed 'opinion leaders', aware of their wider responsibility and guided by a desire for rationality in how things are arranged, have now gained the upper hand over the forces which argue superficially in fashioning opinion on policy, with respect only for the appearance of things. One should have no sense of resignation over the fact that this is a relatively rare exception from the rule. Even progressive income tax required several decades to become rooted in public opinion; conversely, a return to a proportional income tax rate would probably be politically impossible today.

On this higher level, a set of 'contemporary conventions of justice' (to borrow the term used by F.K. Mann[44]) is formed; these are not something which precedes logic, as primitively emotional conventions comprising an unstructured and undefined 'sense of justice', but rather they are rooted in logic to a certain extent and thus 'well-considered', even if the knowledge and understanding of the actual circumstances may be wholly incomplete and the value norm underlying these concepts of justice may be influenced by stereotypes and linguistic crypto-types.[45,46] Furthermore, these conventions are in no way simply a defeat for the received teaching on public finance theory of the era concerned, but are simultaneously also and always an expression of the spirit of the age and the result of discussions in the policy arena; the respectively prevailing ideal thus reflects less an individual thought process than a compromise under which the theorists' findings flow in harmony with the spirit of the age and the opinions of the politicians.

These ideals find concrete expression in the 'principles of taxation'[47] which change and alternate from absolutism through liberal economic theory to socialism and social reform; where these initially served more to justify the levying of taxes at all, as the concepts of the state have changed they have called for the abolition of tax privileges, the 'equivalence' of the tax burden with the sought-after quid pro quo of protection by the state for person and property, the liberation of the poor, and setting taxes on the basis of the taxpayer's ability to pay – and all under the same banner of 'justice'. Given this wide-ranging content, F. Neumark therefore breaks down the postulate of justice into calls for universality[48], equality[49] and proportionality[50] of treatment.

Today's notions of justice have extended these principles to the increased tax burden on income from assets (net worth tax),[51] to favouring taxation on property and income over so-called indirect taxes, and to the progression in the tax tariff.[52] The 'justice' or 'social justice' of the tax system today also includes using taxation in order to redistribute income or assets, to achieve and maintain full employment, and for quantitative and qualitative management of consumption; at times, the discussions have also embraced a 'just' distribution of property ownership (land reform), the education of tough lads to 'satisfy their biologically-ordained *Volk* duties' (applying the motto that 'whatever serves the German people is right') and exercising economic policy control over strong purchasing power in the hands of consumers ('functional finance') as part of tax 'rights' and a 'just' tax policy. To date, there have been no special studies conducted into the currently applicable conventions of justice at this higher level; however, it is possible to draw conclusions about the degree of rationality prevailing among MPs, as a significant group at this level, from the general opinions and attitudes which they express with regard to the national budget and the principles of public financial management. If one attempts to summarize the responses of MPs to this question into a single pregnant formula, then the finding would be that the attitude of most politicians to tax justice is generally expressed in largely unconsidered and stereotypical forms of words, accepted uncritically as being valid for all time and trotted out unthinkingly.[53]

Below this higher level of notions of justice and tax ideals, as formed among active politicians and the informed public, there is a second influencing variable for tax policy in the feelings and sympathies of voters and consumers, taxpayers and the officers of their professional groups and trade associations over tax justice. The words of Thomas Aquinas, according to whom 'distributive justice (has) a relationship even with the subjects amongst whom the distribution takes place, namely to the extent to which they are satisfied with a just distribution',[54] hold all the more weight in a parliamentary democracy where the 'subject' can give expression to his content or discontent more easily.[55] Perhaps the degree of effectiveness of these notions of justice is best demonstrated if one imagines that there was a proposal in Germany to replace income tax with a poll tax, for reasons to do with fiscal efficiencies, or if one were to decide to do away with inheritance tax, as a 'petty tax'; certain taxes and tax arrangements are so strongly associated with notions of justice in the public opinion and in the sensitivities of the individual that for this reason alone it would barely seem possible to do away with them, even if there were considered reasons for doing so such as the argument that by making this change, the tax system overall could be designed to be fairer.

The examples quoted make it relatively easy to attribute the attitude of voters, consumers and taxpayers to these issues to notions of justice; regardless of the extent to which the individual is affected by these taxes, most of those interviewed would feel able to agree at all times with the opinion that these taxes should be maintained. In other instances, it is far more difficult to arrive at this conclusion. If a tax rise provokes strong tax resistance, as is particularly the case with taxes dependent on income and profits, then this reaction cannot automatically be attributed to an injured sense of justice. Here the primary focus is surely self-interest, and the effort to keep one's own tax burden as low as possible; when interviewed, the taxpayer will give quite different answers depending on whether he is being approached as a citizen or a taxpayer. It is all too easy for the citizen to feel that he is being unjustly treated; of those German citizens surveyed in 1958, no less than 67 per cent agreed with the cautiously worded sentiment that today's tax burden was 'unfairly distributed'. By contrast, only a quarter of those interviewed endorsed the view that the things undertaken by the state with these tax revenues were ultimately fully to the benefit of taxpayers.[56] This unclear sense of an unjust distribution of taxes is most marked among independent professionals on the one hand (naturally enough, since they perceive their income tax as an imposition),[57] but on the other hand equally among those professional groups which, although not particularly burdened by tax, have the lowest level of education in citizenship, as demonstrated in the findings of other surveys. This is particularly the case for farmers and blue-collar workers, and for all lower-income professional groups; apart from in the case of the independent professionals, this sentiment is not grounded in one's own experience at all, but is largely unconsidered and emotional in its origins.

This negative attitude to tax justice is all the more striking in that it is noted against the backdrop of general approval of the state and government. Over half of those interviewed responded extremely positively to the 'state' or to their notion of the abstract concept of the state; just one in five people indicated some degree of antipathy, while a further fifth expressed no clear opinion or did not respond. If one compares this attitude to the state with the unconsidered notions of tax justice mentioned earlier, then it is clearly shown that the two areas of association are closely connected; the majority of those who thought that taxes were unjustly distributed respond to the very word 'tax' with a sense of 'something taken away', accompanied by a general mistrust of the state and of public finance theory. In particular, their tax morale corresponds explicitly with their positive or negative attitude to the state, with the general tax mentality and the sense of imposition through taxation.[58]

At this lower level of public opinion, therefore, one should speak less of a rational notion of justice based on one's own experience and independent judgement, and more of a mix of often vaguely sensed, and sometimes even contradictory feelings of justice. This imbalance, and even contradiction, in the prevailing 'conventions of justice' does not however detract from the effect which they have on the practice of politics. Admittedly, they can hardly be adduced to support the detailed framing of a particular tax, given that they are so imprecisely formulated;[59] but they can indicate for the politician the direction in which he needs to head if he wants to converge with the ideas of the voters over the long term.

The modest rationality displayed in the prevailing notions of justice at this level may, conversely, be one of the reasons why this area of public opinion has remained seriously undervalued in public finance theory up until now. At the time when the ethical alignment of public finance theory was engaging critically with the overarching concept of justice in taxation, this lower tier of opinion-forming was not considered at all; ill-disciplined emotions and unconsidered feelings regarding justice and injustice were not viewed as able to offer anything to the intellectual pursuit of *the* ideal tax and *the* just tax system. As this period of conflict over value judgements was drawing to a close, things went very quiet over justice in taxation; even under today's prevailing viewpoint using theoretical models, preoccupied less with designing better taxes than with the possible effects of existing ones, these influences and forces are still wholly neglected.

If public finance theory is not to be an abstract model but is instead to deal with the realities of public finance policy and theory, it cannot ignore these political–institutional aspects and the influencing variables of the formation of political will and administrative practice. It cannot acknowledge notions of justice at the 'higher' level of politics and public opinion and overlook the more blunted feelings and resentments of citizens and taxpayers. These attitudes and patterns of behaviour can be recorded and 'measured' using modern methods of socio-economic behavioural research, and also investigated for the ability to combine them with the existing individual taxes and for their importance for the sense of imposition and tax resistance. The notions of justice on the two levels are differentiated not only qualitatively by the degree of rationality and the impartiality and selflessness of the judgement, but also quantitatively by the volume of information being worked through and the number of taxes to which these opinions on justice or injustice relate. This difference is at its most marked in the wholly different attitude among the two levels with regard to the large group of 'hidden taxes'; these include not only taxes on consumption, including turnover tax, but also large parts of the firmly and definitively institutionally anchored taxes stopped at source, such as wages tax and social insurance contributions.

Both politicians and the informed public are equally familiar with the basic outlines of the tax system as a whole; the decades-long battle by the parties of the left against 'indirect' taxes has left its mark in the notions of justice favouring taxes on assets and income that are ostensibly levied 'directly' based on the ability to pay. The conviction that all 'indirect' taxes are unjust and have a regressive effect in terms of their burden is, however, only held in those circles who are informed about the tax system as a whole and who are aware of alternatives which might, to their mind, bring about 'fairer' taxation; by contrast, at the level of the general consumer, people are largely ignorant of the existence, nature and level of these hidden taxes, whose share of household expenditure is underestimated more as income increases.[60] For these taxes, the sense of imposition at the lower level strikingly corresponds to the 'Cambridge Rule' under which the taxman seeks to convince the poor that they are paying more and the rich that they are paying less than each is in fact paying, in order to keep the former hard-working and the second thrifty; even reductions in these taxes are generally barely noticed, unlike increases in the tax rates, which can occasionally remove the cloak of invisibility surrounding a tax for a while.

The greater the number of hidden taxes to which the population has already become accustomed a long time ago and included in a country's tax system, the less its tax policy consequently needs to take into consideration the sense of justice on the part of voters and taxpayers; the 'imperceptibility' of a long-established tax with unchanged rates where the mechanics for collection have become well-embedded is familiar to public finance theorists as the 'Canard Rule', dating from 1801. 'Old' taxes are therefore generally better than 'new' taxes, from the taxman's viewpoint of wanting to avoid tax resistance, even if in the judgement of those who are better informed they are less 'fair'.[61] Here, in a nutshell, is the dual face of tax justice; the aspiration to achieve better, i.e. more just, taxation in the interests of the notions of justice held by informed public opinion may strengthen the sense of imposition experienced by the broad mass of taxpayers, instead of lifting it. Conversely, even where a tax is devised with little or no justice in it, it barely provokes tax resistance if it has been in place for a long time and is firmly anchored in the various institutions; the temptation to leave the conventions of justice developed at the higher level well alone, so long as no active political pressure is pressing for them to be taken into consideration, is an overwhelming one for politicians.

The most important task of public finance theory, however, remains to investigate in greater depth the 'lower' level of feelings and notions of justice among the mass of consumers, taxpayers and voters. This too is a task for empirical research, and it should aim to solve the difficult question as to how these attitudes can be crystallized out as purely as possible, i.e. stripped of the resentments which those concerned naturally harbour against taxes by virtue of being imposed on them personally. Alongside the familiar global notions of justice, here the challenge will be to research the specific attitude of taxpayers to individual taxes, broken down by the individual sense of imposition and the objective attitude to taxation as such, in order to ascertain what the taxpayer thinks about a particular tax and whether he considers it fair or not in itself, regardless of his own personal sense of imposition. The sense of imposition can, as mentioned above, diminish as the taxpayer becomes more accustomed to a tax; but quite possibly his notion as to whether it is fair or not in itself may be wholly unaffected by this. The task for public finance theory is to conduct research of this kind into the 'contemporary conventions of justice' at both levels for a particular economy, and to contrast the postulate of justice understood as a result of this with the actual reality of taxation – yet without thereby raising the suspicion that the theorists are themselves making value judgements. The decision as to how the findings of such research are to be used remains entirely one for the politicians.

5.4 The German tax mentality

In summer 1958, in order to find out more about the Germans' specific attitude to tax, a representative cross-section of the West German population was asked the question:

> To a certain extent in other languages the word 'tax' has the following meaning: 'I have to hand something over', 'I have to contribute something', and 'Something is taken away from me'. Which of these three meanings applies most to Germany?

When posing this question it was assumed that the words 'hand over' are devoid of any particular emotional value in normal linguistic usage, while 'contribute' and 'taken away' are deliberately filled with emotion. 'Contribute' contains an element of volition and activity, up to a certain pride, while the formula 'Something is taken away from me' implies something of angry or even impotent toleration of an intrinsically unfair act. The answer to this question not only betrays something about the German tax mentality, but also allows simultaneous identification of which terms would be preferred today if the phenomenon of 'tax' were to be renamed.

In so doing it first emerged that 'hand over' actually is a relatively *neutral* word, where impressions of a very different kind meet. In almost all population groups 'hand over' is most frequently named as appropriate and always with roughly the same frequency (around 40 per cent). Furthermore it can be deduced from answers to the question that more than two-thirds of those questioned withstood the demagogic temptation that suggested defaming taxation as a 'deduction'. Only 32 per cent gave in to this temptation, mostly younger members of the lower education and income groups. The fact that tax mentality is by no means a uniform attitude and that there is no 'obvious' standard for objective consideration of taxation is shown by the partly very substantial differences that emerge from stating of both the other expressions. Gender and age already suggest certain attitudes to tax (cf. Table 5.1); accordingly, the younger the interviewee, on the one hand, a low earner already concerned with securing his livelihood on the other, the more he perceives tax as an unjustified intervention that 'takes something away' from him – an attitude that decreases with increasing age.

Attitudes to tax are further modified by the interviewees' education, profession and social strata (cf. Table 5.2). The better his or her education and the higher the social stratum to which he or she belongs, the more he or she associates the concept of 'contributing' with paying tax, and the less he is aware that he is having to 'allow something be taken away' from him. Of the professions, industrial and agricultural workers and the self-employed are least of the opinion that paying taxes is a 'contribution', completely the opposite of civil servants, of whom only a small group equate paying taxes with 'allowing money to be deducted', as the majority of industrial workers do.

It was not possible to ascertain clear regional differences. Size of residence and level of family income appear to have little influence on the basic attitude to taxation.

Before evaluating the results of this survey it is of course indispensable to always bear in mind that each of these questions simultaneously triggers *emotions*, and emotion-laden statements gained from them. Conversely this connection may have become clear to many people with

Table 5.1 Germans' attitude to tax, by gender and age group (%)[a]

	'I must hand something over'	*'Something is taken away from me'*	*'I must contribute something'*	*No statement*
Men	36	30	34	0
Women	42	33	24	1
Age groups				
16–24 years	39	36	24	1
25–29 years	36	36	28	–
30–49 years	38	33	29	0
50–64 years	39	29	30	2
65 years and older	45	23	31	1
Total	39	32	28	1

[a] Table title added by editors.

Table 5.2 Germans' attitude to tax, by education, profession and social stratum (%)[a]

	'I must hand something over'	*'Something is taken away from me'*	*'I must contribute something'*	*No statement*
School education				
Elementary school	40	34	25	1
O levels	33	24	42	1
A levels, college/ university	36	24	40	–
Professional groups				
Blue-collar workers	35	42	23	–
White-collar workers	36	29	35	–
Civil servants	37	14	49	–
Self-employed	46	29	25	–
Farmers	48	23	29	–
Agricultural labourers	54	24	22	–
Pensioners	42	29	29	–
Stratum				
Upper class	38	24	38	–
Upper middle class	39	24	37	–
Middle class	38	30	32	–
Lower middle class	40	33	27	–
Lower class	42	41	17	–

[a] Table title added by editors.

a higher degree of education to the extent that they just said 'contribute' when they actually meant 'take away'. At any rate, this group reveals a 'more rational' attitude to taxation than the others, although this does not at the same time say something about the tax morals of the individual interviewees.

This was confirmed by the result of a further survey. The interviewees were able to respond freely to the question 'What springs to mind if you hear the word "tax"?' This makes evaluation of answers that cannot be easily categorized schematically more difficult on the one hand, but on the other results in a particularly colourful picture of Germans' general tax mentality. More than one-third of interviewees associate purely objective, technical or organizational concepts with the word 'tax', i.e. that they are tax contributions, deductions from salaries, payments to the state, fixed-term payments to the Inland Revenue or similar. Almost one-quarter of interviewees spontaneously approved the need for taxes (necessary evil, maintaining the state); criticisms and negative opinions are present in less than one-third of answers. This overall objective, measured, even indifferent attitude to taxation is once again strongest in the case of recipients of wages and salaries, civil servants having the most positive attitude, the self-employed appearing to have the most negative. Aggressive statements and disapproval comprise around 40 per cent of replies in this group (see Table 5.3).

If one assumes that from such 'associative questions' one can discover which aspect of a question is most important to the interviewee, then it is particularly clear from this question that the word 'tax' is associated predominantly with an experience content of a unique kind, not an attitude to the state as an assumed entity. This result is confirmed if one compares the answers to the question above concerning the meaning of the word 'tax' with the answers to two other questions:

1. 'Do you think that taxes are apportioned fairly?' and
2. 'Do you think that people get a full service in return for their taxes?'

These questions also enquire about feelings and opinions rather than knowledge. Most of the negative responses to them came from the self-employed and from industrial workers, from the DM 260 to 390 per month income group (net family income) and the 30–50 age group. The most positive answers came from civil servants and pensioners, from the group with an income exceeding DM 600 per month and from the over 65 age group (see Tables 5.4 and 5.5).

If one compares these responses with those to the question about the meaning of the word 'tax' (Table 5.6), it appears that the word 'hand over' may be the common denominator for both positive and negative attitudes to taxation and is right in the middle of the two other words, while a negative attitude to tax, as expressed in choice of the meaning 'take away' is accompanied by a general distrust of the state and public finance. Conversely, the same applies to the positive attitude (Table 5.6).

We can therefore determine that if the phenomenon of tax were to be renamed today, most Germans would probably resort to the neutral, objective and yet clear words 'handing over'. While words such as *impôt, imposto* or *impuesto* still convey the idea of someone who imposes the tax on the liable, and the word 'duty' conveys the awareness of fulfilling

Table 5.3 Associations with the word ‘tax’, by profession (%)[a]

Associations with tax	*Total*	*Blue-collar workers, agricultural workers*	*White-collar workers*	*Civil servants*	*Self-employed*	*Farmers*	*Pensioners*
1. Deductions, contributions	21	26	24	26	13	11	16
2. Payments, payment deadlines	10	10	9	10	9	10	9
3. Authority (tax office)	5	3	3	4	4	8	4
4. Special taxes and tax laws	3	4	3	2	1	4	2
(objective–technical–organizational 1 to 4)	(39)	(43)	(39)	(42)	(27)	(33)	(31)
5. Unpleasant feelings	13	13	15	10	18	14	10
6. Too many and too high taxes	8	9	9	6	10	8	7
7. The ‘evil’ tax office	3	3	2	2	5	9	4
8. Aggressive statements	2	2	2	2	5	1	2
9. Rejection of uses	2	2	2	2	2	2	1
10. Getting angry	1	1	1	1	1	1	2
(negative 5 to 10)	(29)	(30)	(31)	(23)	(41)	(35)	(26)
11. Need for national and local government; necessary evil	23	18	23	28	26	22	28
12. No details	9	9	7	7	6	10	15
Total %	100	100	100	100	100	100	100

[a] Table title added by editors.

Table 5.4 Replies to the question 'Do you think that people get a full service in return for their taxes?' (%)

Professional groups	*Do not get full service*	*I benefit fully*	*No details*
Blue-collar workers and agricultural workers	69	25	6
White-collar workers	63	35	2
Civil servants	36	60	4
Self-employed	74	23	3
Farmers	59	30	11
Pensioners	44	39	17
Total	61	32	7

Table 5.5 Perceived fairness of taxation, by profession (%)[a]

Professional groups	*Taxes are*:		
	Unfairly apportioned	*Fairly apportioned*	*No details*
Blue-collar workers and agricultural workers	72	20	8
White-collar workers	65	29	6
Civil servants	60	36	4
Self-employed	71	23	6
Farmers	66	23	11
Pensioners	55	30	15
Total	67	25	8

[a] Table title added by editors.

Table 5.6 Perceived fairness of taxation and meaning of 'tax' for respondent (%)[a]

Meaning of 'tax'	*I find taxes*:			*People receive*:		
	Fairly apportioned	*Unfairly apportioned*	*No statement*	*A full service*	*No service*	*No statement*
'I must hand something over'	26	65	9	33	59	8
'Something is taken away from me'	14	78	8	14	78	8
'I must contribute something'	35	57	8	52	45	3

[a] Table title added by editors.

an obligation to another by paying tax, the turn of phrase 'I must hand something over' largely relates to the person whose personal situation is placed in the spotlight handing over the tax. It can perhaps be said that this choice of words once again makes clear what has been said previously, i.e. that in fact, basically, Germans do not have a negative relationship with the state; really they hardly have a proper relationship at all. To them the state is more of an anonymous apparatus that must function and, although it may be necessary, people neither identify (positive) with it nor get involved in a dispute (negative) with it.

5.5 Tax mentality in international comparison – an overview

1. In the field of fiscal theory attempts to justify the levying of taxes have been abundant; yet paying taxes remains a process never carried out by much enthusiasm on the part of taxpayers who show a spectacular absence of any positive motivation for doing so. The state authority, on the other hand, mostly acquiesces in pointing out the necessity of raising revenue and the obvious dependency of the individual upon the institutions of the state, arguments of a rational character but rather abstract. Benefits accruing from tax payments to the individual are not very evident and cannot be expressed in terms of dollars and cents in most cases. Furthermore, the continuously changing system of fiscal law as well as the overall complexity of the entire system both contribute to make the total tax burden appear as rather arbitrary, incomprehensible and hostile.

Even a detailed knowledge of any given tax structure, of tariffs and percentages of various taxes in the total revenue, or total revenue as percentage of GNP does not reveal anything about feelings of taxpayers and their actual willingness to pay taxes. Neither tariffs nor figures of global tax revenue can indicate to what degree taxpayers perceive their tax duty as unjust and oppressive and consequently make use of every angle and loophole within the revenue system as well as – in extreme cases – even bribery to at least partially evade their legal tax obligation. The obvious phenomenon, that in different societies there exist different thresholds of tax enforceability, has for a long time been banned into the footnotes of tax literature. But in reality, this is one of the most important aspects of taxation in any theory of tax effects; de facto here the real latitude of fiscal policy is determined. Though intensive research in this area has been lacking so far, investigations into this aspect of economic behaviour can fruitfully be undertaken using the methods of survey research.

2. First studies on taxpayers' psychology were conducted in the Federal Republic of Germany in 1958 and 1963. In the following years, our Cologne Research Institute for Economic Behaviour carried out a large-scale international comparison of tax enforcement thresholds by methods of survey research: taxpayers of Great Britain, France, Spain and Italy were interviewed as to their tax mentality, tax tension feelings and tax morale. Samples in each country comprised about 1000 people consisting mainly of urban males aged 18 and more. Data from France permitted an interesting cross-check with results obtained by Dubergé (1961). The international comparison, however, was not restricted to survey research only, but also implied a critical examination of tax enforcement techniques in Britain, Germany, France, Spain and Italy.

Our first approach to the problem was to look into the enforcement techniques of existing income and profit taxation. It turned out that, in spite of considerable returns from these taxes, the business sector in France, Spain and Italy is not subject to a profit or income taxation worth its name, if only large corporations (particularly in Italy and France) are excepted. This paradox dissolves, however, when we return to the assessment procedures: bookkeeping is unreliable, auditing is incompetent, cooperation with the tax office is practically non-existent, and law enforcement, on the other hand, minimal. In reality, bases of assessment of 'profits' in most individual firms are visible characteristics like premises, machinery, number of employees, cars, size and location of the company, general business conditions, etc. Even the sales figures, delivered to the tax office, are in most cases quite unreliable. As these indicators are about the same for profitable, less profitable and not profitable firms (actually they describe only size and scope of the enterprise), it is obvious that here profit taxation has degenerated to a payment on a very crudely assessed production capacity of the enterprise.

Now it is far from easy to change these engrained behaviour patterns by legislative action. There is notorious distrust in all Romanic peoples against tax collectors; an illustrative indicator of this are the semantic differences in tax terminology. Whereas, in the Latin world, the word 'tax' means something felt as an 'imposition' upon the citizen (*impôt, imposto, impuesto*), the German word *Steuer* means 'support' and the Scandinavian *skat* the common treasure put aside for common purposes. On the basis of such different tax mentalities, closely connected with the citizens' civic or community-mindedness in general, individual tax-mindedness develops by personal experiences. Confronted with the obligation to pay, the taxpayer feels inclined to a certain degree of resistance, leading to evasion, tax-dodging, or even to open revolt, like M. Poujade and his followers in France.

The task of comparing not single taxes but whole systems of taxation with each other necessitates some simplifications and abstractions in order to avoid the jungle of special administration differences. We applied the term 'expensive' to a tax system attaining its goal at the price of heavy 'confrontation' leading to general tax resistance; a tax system, on the other hand, is rated as 'effectful' if taxation according to ability to pay is attained without hampering too much the feelings of taxpayers.

As a result of our international survey the main features of different European tax systems may shortly be summed up as follows.[62]

In Germany, we find a very 'effectful' but also very 'expensive' tax system. Taxation according to the legal definition of ability to pay is realized to a fair extent but at the price of an intensive 'confrontation' with tax enforcement and control, particularly on the part of the self-employed. Compliance costs therefore exceed by far those found in other countries. The logical consequence of such relatively coercive tax enforcement techniques is the high degree of alienation between citizens and the state and between the penal code and the code of penalties in case of tax fraud. This alienation, in turn, negatively influences the willingness to cooperate with tax authorities. Cooperativeness measured by attitudes towards tax fraud and the tax offender, toward the tax system in general and its degree of justice and equity, is comparatively low. On the other hand, compliance is satisfactory.

In England, traditional acceptance of the 'rules of the game' contributes to a frictionless functioning of the tax system; anyhow, the British tax system treats businessmen and professionals with great caution, dispensing with every form of administrative auditing and offering a rich reservoir of 'loopholes', while imposing much less obligatory accounting procedures than in Germany. This strategy helps much to avoid friction and resentment; on the other hand, easy opportunities for avoidance and evasion and the lack of control lead to a relaxation of attitudes towards tax offences. The British tax system is 'inexpensive', by avoiding tax resistance, but not as 'effectful' as the German one in so far as taxation is not quite realizing all the different allocative and distributional goals as expressed in the tax law.

The French, Italian and Spanish tax systems are very similar to each other; they are, at the same time, relatively 'ineffectful' but also 'expensive', not only because of their extremely crude assessment procedure but also because revenue return is insufficient for the needs of a modern industrial nation. Even the chance to realize at least this primitive system without provoking tax resistance has been missed; the discrepancy between tax law and reality, the arbitrary assessment and insecurity as to one's legal obligations, lead to a deterioration of attitudes to a sometimes grotesque degree.

Policy implications of these findings are of practical as well as of theoretical interest. The first step to improve the situation in the Romanic countries would be to replace any hypothetical patterns of so-called income taxation by an open levy on the use of factors of production. The existing discrepancy between law and compliance leads to arbitrary assessment, corruption and a general disregard of the law; in this general climate only a shift from income and profit taxation to easier forms of revenue may help. In the meantime, there ought to be more investigation into the striking international differences of enforceability of any 'direct' taxation: under what circumstances are taxes on income and profit, requiring a high degree of cooperation, of abstract and rational behaviour patterns (bookkeeping, valuation procedures, etc.) enforceable?

A glance through history shows clearly that the *occupational structure* of a country to a large extent also explains the degree of 'taxability' of its population. As long as the larger part of labour force is engaged in agriculture and small trading, income and profit taxation is bound to remain unsuccessful; the administrative effort as well as the demands upon tax honesty would be so great that the pay-off in tax revenue would tend to be insufficient to warrant this effort. The higher the percentage of private incomes to be derived from government and from large corporations, the higher the chance of income and profit taxation. Accounting procedures of large organizations are normally elaborate and reliable, and the costs of auditing are small compared to the tax return.

Finally, the different emphasis between income and consumption taxes among different groups of countries is important for their competitive position. It appears to be a realistic assumption that an emphasis on consumption taxes favours the more efficient over the less efficient competitor in a market. Assuming, furthermore, that net profit has a bearing on economic growth and that more profitable producers are more efficient in expanding their productive facilities than their less productive competitors, a strong emphasis on consumption taxes seems in favour of economic development, whereas insisting on profit and income taxation may result in adverse effects.

3. Turning to the role of the taxpayer, we are confronted with the problem of how taxes influence behaviour. In countries where income and profit taxes have degenerated into a crude selective tax on factors of production not requiring much cooperation, loyalty and honesty on the part of the taxpayer, it is not easy to draw conclusions about their immediate behaviour. To put it bluntly: Where taxes do not rely on cooperation for their enforcement, there is *ex definitione* no choice and little discretionary latitude of action for the taxpayer; thus his attitudes matter less. Where taxes are a matter of bare negotiation or crude assessment, even the concept of tax offence loses its significance. However, the question is to what extent reforms are being tolerated by the public; here taxation is a special case of the 'political culture' of a population (Almond and Verba, 1963). The limits of what people tolerate along the lines of tax enforcement have been clearly demonstrated by the Poujadist movement.

Attitudes are, however, important for the chance of these tax systems to proceed towards a more delicate, highly developed, tailor-made taxation scheme based on the individual ability to pay. Where attitudes towards government and towards tax enforcement are relatively level-headed, indifferent, but not outright hostile, the chances are fair for an improvement of conditions by breaking the vicious circle of discrepancy between legal and actual tax assessment techniques, perception of inequities and distrust, and institutionalized hostility towards everything connected with taxation. It seems little probable that the population of south European countries would tolerate a heavier emphasis on income and profit taxation, inevitably linked to an inquisitive enforcement technique and a high degree of 'confrontation' between taxpayer and tax administration. We have to realize that tax enforcement is a behavioural problem, as any success of an income tax depends on cooperation; this means not so much individual but group cooperation. The tax administration can make up for individual tax resistance but not for the hostility of the whole group or of everybody concerned. If merchants, as a matter of fact, write out false receipts to enable their clients to label private expenses as business expenses, or if employers (usually and as a matter of fact) give false information to the tax office about their employees and wages paid, a general income tax is simply not enforceable. Therefore, not so much individual reluctance or hostility is of importance but social norms: What role does the tax offender play – is he considered a gentleman thief or a law breaker violating the legitimate claims of the community? Here tax mentality and methods to measure it enter the picture.[63] The function of survey research is not only the measurement of compliance on the micro level, but to follow undercurrents of popular discontent, alienation and hostility against taxation as well. By doing so, it helps assess the enforcement chances of alternative tax policies and devise a strategy respecting the limits of enforceability of direct taxation.

In spite of the quite rigid constraints to which tax policy is subject in the short run, there remains substantial discretion for shaping tax mentality in the long run. By keeping tax laws within the limit of the enforceable, there will be little leeway for evasion or insecurity on the part of the taxpayer as well as for administrative arbitrariness. In contrast, any gap between law and reality is bound to foster alienation, perceptions of inequity, and refusal to cooperate.

4. In connection with the change of emphasis of modern taxation, particularly income and wealth taxation, from distributive to allocative goals, there is to be taken into consideration the trend frequently referred to as 'erosion of income taxation'.

There are innumerable examples of this trend of 'tax erosion'. Using tax strategies for the purpose of fostering certain forms of business investment has a long-standing history. Furthermore, there are allowances for the education of children, tax exemptions for income in kind (home production), etc. Tax erosion is caused not only by measures of economic but also of welfare policy. In addition to adopting such new supplementary strategies, modern income taxation consciously abandons conventional concepts, as for example the minimum of subsistence as a point of reference for determining income taxation. It is obvious that personal exemptions of $600 per person are not considered sufficient, not even in the lowest social strata, to guarantee a satisfactory level of living. The modern welfare state – also in most other industrial countries – does not stop short of taxing even the minimum level of subsistence.

Looking at erosion from an allocation-oriented point of view, we note the case of prohibitive taxes, designed to fine certain forms of economic behaviour (liquor, tobacco and other punitive taxes). Moreover, a gradual erosion of a purely distribution-oriented tax policy is connected with some new trends in welfare policy. Clearly, there is a tendency in welfare policy away from pure income transfers. This is based on the recognition that poverty is not so much a matter of lack of financial means but a way of life. Income transfers, although necessary, are not sufficient as incentives to break the poverty circle; this rather requires and presupposes acquisition of new behaviour patterns.[64]

5.6 A theory of incentive taxation in the process of economic development

Only recently did writers on taxation agree to include economic growth in the goals which can serve as criteria of a rational tax policy. Policy, in this instance, is far ahead of theory; not only the obvious contributions of various modern tax systems to economic development[65] but also the conscious adaptation of modern tax policy to the requirements of economic growth – even at the expense of some hitherto predominant principles like equity and fair sharing of the tax burden – are indicators of the lag of theory behind practice. The former has every reason to close the existing gap by catching up with events; only a sound theoretical basis for growth taxation can make possible a fiscal theory to point to long-run improvements in taxation and establish criteria by which tax policy can be judged in the decades ahead.

Let me first define the scope and potential of any growth-oriented tax policy. Basic doubts about the suitability of taxation for fostering economic development remain even in modern literature on public finance. It is argued that there could be no doubt about the paralysing impact of taxation on development and therefore only the incorporation of government spending into the analysis could possibly result in a favourable overall impact of public finance on economic growth.[66]

Although some scepticism about any global impact of taxation on growth seems amply justified, the argument might be pushed too far if it is used to confine tax policy to the goal of minimizing the growth-retarding effects of taxation. It is by now well-established that growth-retarding aggregate effects can be balanced, even overcompensated, by the growth-stimulating effects of taxation in certain sectors. Not only the experience with post-war growth in Germany but also the lessons of other successfully developed countries and regions demonstrate the further impact of tax policy.[67]

I

Before we discuss in detail the scope and potential of incentive taxation oriented towards economic development, we have to deal with a few elementary restrictions imposed on the realization of every tax policy. The proposition is generally accepted in fiscal theory, that the more accurately a specific tax is tailored to the existing ideals of 'equity' and 'ability to pay', the more difficult its correct and unequivocal assessment will become. The more monetary aggregates like sales, income, wealth, or even characteristics of the individual's economic situation are used for the determination of the tax base, the more advanced abilities, skills and motivation are required on the part of both revenue officials and taxpayers. A high standard of rational reasoning and abstract thinking is inevitably needed to put such complicated taxation mechanisms into smooth operation.

Training the mind for rational reasoning and the capacity for abstract thinking, however, vary considerably between countries in different stages of socio-economic development; these factors, therefore, account for considerable differences – from country and from time period to time period – in the ability of societies to absorb and sustain various forms and degrees of closely tailored taxation.

Let us try, then, to spell out more precisely our hypothesis about the degree of absorption a specific tax is able to reach in the behaviour patterns of the public, or as we might term it, its degree of enforceability. Almost any tax must invariably reckon with a certain quota of fraud and tax evasion. As soon as this percentage, however, surmounts a given mark the original concept concerning the desired distribution of the tax burden is endangered; revenue authorities are no longer capable of controlling and metering the actual tax burden. Therefore, it may very easily happen that an income tax designed to closely fit the taxability of the individual gradually fades away into a rough and vague approximation to this perfect scheme; the actual tax payments then depend on circumstances like misgivings about tax cheating, lack of personal relations with the revenue office, and advanced knowledge of evasion techniques and legal loopholes.

If such symptoms emerge and short-term measures do not bring about any remedy, the government in introducing this tax has simply overestimated its enforceability, misjudging the taxability of its citizens or the efficiency of its tax administration, or both. Misjudgements of this sort have been very frequent in the past; in most cases they were the result of transplanting the tax system of a highly developed country too rigidly into a society of a lower economic level without sufficient regard to its peculiarities.

In a situation like this three reactions are to be observed.[68] The first one is surrender, or the complete withdrawal of the tax, the government openly acknowledging to have been misled in designing the concept in the first place.

More often we find an attempt to defend undefendable ground. In the long run this will inevitably end with the government tolerating a certain gap between the legal obligation to pay taxes and the actual tax compliance; in other words, it means that the state allows its citizens to only partly fulfil their obligation and thus to grant extra tax privileges contradicting original intentions.

The third possibility means resetting the line of defence by introducting more 'object-bound' assessment criteria, often on the basis of *signes extérieurs* or other easily identifiable symbols of the individual's economic position. This procedure, of course, is nothing more than a thinly disguised retreat from the principle of individual assessment towards a more approximate and coarse method of taxation, performed in the vague hope of increasing the degree of overall enforcement of the tax in the years to come. An income tax, for example, will most certainly turn into a luxury tax as soon as in shaping the technical procedure the income of an individual is estimated in accord with the level of consumption displayed. Frequently nothing remains of the original personalized tax except the label.

II

Let me now, for reasons of clarification, turn to the situation in Spain.[69] This country is presently undergoing an accelerated process of industrialization. Its highly 'modernized' system of taxation had to be abolished because both administrative efficiency and taxability of the Spaniards had been grossly overestimated. The traditional gap between legal tax liability and actual tax compliance was further widened by the adoption of 'better' tax laws from higher developed countries during the tax reforms of 1957 and 1964.

These tax laws stated that any calculation of profits was to be done by using the accrual method which would have rendered a very personal and individualized tax apportionment. Actually, however, the assessment of income and yield taxes[70] of Spanish self-employed and professionals are fixed by tax commissions – which by the way partly consist of representatives of the taxpayers themselves – the basis of assessment being the size of the mechanical equipment used for production, the number of people employed or other conspicuous characteristics of the enterprise.

It goes without saying that an apportionment on the grounds of such external features will, at best, render an approximate measure of that shop's *capacity* for production, whereas the actual production, sales or even the business profits just cannot be assessed by this method. For example, the number of employed workers is by no means necessarily in close relation to the actual volume of production. The differences in the degree of modernization and the productivity of labour existing between progressive and more traditional firms of one branch may be large to the extent that the production of older units is hopelessly overrated, whereas modern units are extremely undervalued.

If it is already rather hazardous to assess the aggregate ‘turnover’ by using external features, the residual quantities ‘income’ or ‘net profit’ are all the more difficult to rate correctly on such a basis, since they represent the surplus of gross income over production costs. It hardly needs mentioning that in a modern economy two enterprises of the same line and size may differ greatly in their profits, no matter what criteria are used as a measure. The profit percentage of total sales may range from 0 to 20 per cent or more, and even the same firm may show ups and downs of such a percentage over any period of years.

The failure of the present Spanish taxes is reflected in Table 5.7 containing answers of self-employed businessmen and professionals to the question: ‘Considering that business conditions vary from year to year, your income in one year might be for example 10 per cent lower than in the year before. Would you then have to pay the same amount of taxes or would your tax burden be smaller?’

A second question started out from the opposite assumption: ‘If your income grew by 10 per cent’, it was asked, ‘would you then have to pay the same or a higher amount of taxes?’ (Table 5.8).

The answers to the first question suggest that about two-thirds of the independent taxpayers in Spain do not see any connection between their actual tax burden and a possible decrease in their income. The fact that the answers to the second question were less conclusive most

Table 5.7 Perceived variations of tax liability in relation to income decreases

	The tax burden . . .				*Total (%)*	*Number of cases*
	Remains the same (%)	*Is reduced correspondingly (%)*	*Is raised either way (%)*	*Don’t know (%)*		
Entrepreneurs	66	23	3	8	100	190
Professionals	61	27	1	11	100	212
Self-employed and businessmen	73	15	1	11	100	213

Table 5.8 Perceived variations of tax liability in relation to income increases

	The tax burden . . .			*Total (%)*	*Number of cases*
	Remains the same (%)	*Is raised (%)*	*Don't know (%)*		
Entrepreneurs	42	50	8	100	190
Professionals	46	44	10	100	212
Self-employed and businessmen	59	30	11	100	213

probably results from the emotional implications touched upon in this case: hardbitten adversaries of taxation do not like to admit that there is such a fairly easy way of lowering their relative tax burden.

My suspicion that in the present state of socio-economic development in Spain a taxation scheme based on bookkeeping was bound to fail, is confirmed by a quick glance at the technical design of the sales tax of June 1964.[71] In this case the tax liability was to be apportioned by employing the same external features that had already been used for the profits tax; strange as it may seem, the actual turnover as it appears in the bookkeepings had to be disregarded because a realistic assessment was impossible.

The result of a such a strategy is of course a multiple tax burden of a few bases and numerous distortions of otherwise economical business decisions. If, for instance, the number of people employed serves as an indicator for simultaneously determining both the sales tax and profits tax, it is highly probable that human labour will be exploited to a great extent, either by introducing longer working hours or by increasing the amount of work per hour; on the other hand, such taxation must work as a barrier against any increase in the number of employees and, consequently, against economic growth.

These consequences, however, may partly be compensated by the relatively low taxes levied upon the highly modernized, productive and well-earning companies. Since the basic tax liability is derived from some sort of fictional 'average company', taxation will endanger the capital substance of marginal firms only. On the other hand, it may measure out extra incentives and liquidity to establishments with high earning power, enabling them to expand at a faster rate than would be attainable if a regular profit tax could be properly enforced.

This peculiar type of tax assessment according to external signs of size and success contains a number of aspects which just do not tally with the general aim of social welfare policy. If, however, this procedure is restricted exclusively to the group of independent businessmen, the mere welfare argument does not weigh as heavily. As far as taxing the employees is concerned, the Spanish habit of levying income tax at the source takes to a certain extent into account the personal ability to pay as well as individual tax exemption. But we should realize that this considerable difference existing between the taxation of the self-employed and corporations on the one hand and of dependent labour on the other does not lack a specific, hidden logic when it comes to the alternative of income redistribution versus economic growth: the employed, being the primary object of social welfare in industrialized countries, are being taxed according to their individual ability to pay, whereas the group of the independents, viz. the most important actors in economic decision-making, are subject only to a tax of 'cost' character with specific effects on the improvement of the overall economic structure. Entrepreneurs with above-average earnings receive reward, incentives and help for expanding their business activities by being able to fall back on their 'tax savings'. Considering that this tends to force the weaker firms out of the market, we may conclude that the social welfare aspect must give way when it comes to taxing the independents, leaving them plenty of leeway to determine their productive contribution to the economy. In contrast, the employed workers being tied to fixed working hours and a certain age of retirement, can be reached more comprehensively by a redistributive type of taxation without impairing the goal of a growth-oriented fiscal policy.

III

The enforceability of an individually tailored income tax, therefore, seems to depend on certain historic conditions, including a specific 'tax mentality', as on a number of very specific socio-economic conditions of the countries concerned as well. After thus outlining the boundary conditions within which any effective tax policy will have to operate, we now turn to a more detailed discussion of its scope and potential for influencing structural chances leading to economic development.

Obligation to pay taxes is almost as universal as compulsory school education and conscription. Practically everybody can be made liable to taxation, and therefore amenable to a certain economic pressure by the government. In contrast to transfer payments to private enterprises which are generally incompatible with the basic rules of free economies, the manipulation of the existing financial relation between government and citizens called 'taxation' is generally accepted. However, taxes and transfer payments have one thing in common: both can be described as a similar method of influencing economic behaviour indirectly, namely through a variation of the data relevant for decision-making even if both refrain from any direct control of these decisions.

As far as incentive taxation is concerned, this guiding influence can operate through two different mechanisms:

1. The income effects; taxation is in a position to indirectly channel disposable capital away from growth-lagging to growth-intensive sectors by granting selective exemptions.
2. The announcement effects;[72] a growth-generating behaviour can be revoked by the desire to escape taxation, i.e. to avoid the taxable fact altogether.

Many writers confine the objective of a growth-oriented tax policy to stimulation of saving investment.[73] Since the lower-income groups are presumed to have a higher marginal rate of consumption than the upper, tax policy – according to this approach – can be content with trying to reduce highly consumptive incomes; furthermore, as the impact of taxation on work is far from being conclusive[74] the only sure path is for taxation to cut down consumption as much and saving as little as possible.

In contrast to this macroeconomic approach, behavioural analysis of incentive taxation attempts to separate the quantities 'total consumption' and 'total saving', at the same time to ask for the growth-generating productive behaviour of taxpayers or beneficiaries of tax exemptions respectively. Sectoral tax exemptions meet their growth objective only under the condition that there is sufficient motivation to spend the additionally disposable amount on productive investment, and that the desired investment would not otherwise take place regardless of the additional incentive from taxation.

An example of an indiscriminate application of a policy based solely on income effects is to be found in the Philippines, where a very wide range of enterprises have been classified as 'new and essential' and accorded tax exemption, with no clear stimulus to private net investment.[75]

A growth-oriented tax policy relying more on the announcement effects follows a different path: at the extreme end of their scale we find taxes which are imposed not with the purpose of collecting them but to persuade people to behave in a certain way to avoid them. Less extreme are taxes which are fiscally quite lucrative but contain certain exemptions granted under the condition that a certain action is taken, as for instance the income taxes of most modern states. If such tax-freeing behaviour is not originally intended by the legislator, these provisions can be considered 'loopholes'; otherwise, they reflect the pragmatic, if not openly admitted, decision between the alternatives 'equity versus efficiency'.

IV

To look for the most promising strategic points of intervention in the economic structure for tax policy we have to analyse the process of economic growth, i.e. to separate its different components. It may prove useful to distinguish between two sectors of economic behaviour: the enterprise sector and the household sector. Entrepreneurial decisions relevant for economic development are, above all, dispositions about production and investment (including research and product development); whereas the most important growth-relevant decisions of the private household are its *occupational choice* (including decisions with regard to education) and local mobility.[76]

Obviously no growth-oriented tax policy can dispense with a further classification of both the enterprise and the household sectors. The entrepreneurial sector is composed of several subsectors among which Rostow[77] distinguishes:

(i) Primary growth sectors, where possibilities for innovation or for the exploitation of newly profitable or hitherto unexplored resources yield a high growth-rate and set in motion expansionary forces elsewhere in the economy.
(ii) Supplementary growth sectors, where rapid advance occurs in direct response to – or as a requirement of – advance in the primary growth sectors; for example coal, iron and engineering in relation to the railroads. These sectors may be tracked many stages back into the economy.
(iii) Derived-growth sectors, where advance occurs in some fairly steady relation to the growth of total real income, population, industrial production or some other overall, modestly increasing variable. Food output in relation to population and housing in relation to family formation are classic derived relations of this order.

The sectoral 'point of gravity' of economic development, i.e. the 'key industries' whose entrepreneurs are most crucial for the rate of economic growth of subsequent years, changes frequently. During the rise of today's industrialized countries this key role was at first taken over by the cotton-textile industry together with food processing industry, later on by railway construction, and the coal and steel industry, finally – in the mature economies – by the automobile industry.[78]

Before we discuss more specifically the possible effect of tax policy on the economy during various stages of its development, some impulses emanating from the 'leading' sectors have to be described more clearly. Hirschman distinguishes mainly two kinds of intersectoral influences on the economic structure: 'backward effects' and 'forward effects'.[79] The so-called backward effects are the adaptive reactions caused by the additional demand for materials, machinery, services, etc.; even demand-induced changes in the labour market, i.e. the increase in the quality of the labour force as the consequence of industrial employment, fall into this category.

The forward effects consist in the quantitative and qualitative increases of output in a particular sector, i.e. the additional linkages resulting for the economy from efficiency gains in one sector. The enormous stimulus resulting from the construction of the railroad from east to west coast initially quite unprofitable in the United States for the economic development of the western states may serve as an example.

The 'key sector', even if it can reliably be identified, may not in all cases serve as the main target of growth-oriented intensive taxation; tax preferences may not always have the desired effects on investment. Particularly in developing countries even very profitable activities remain frequently unutilized or underutilized; economic growth not only depends on the potential economic linkage of the target sector with suppliers and customers but also on the degree of adaptability with which the newly created market and profit chances are utilized by the private decision-makers. On the other hand – this being another boundary condition – it is very possible that the rate of expansion and the efficiency of the key sector are already sufficient without fiscal intervention to cause the desired chain reaction in other sectors. In other words, the impact of tax interventions on the highly important sector may sometimes be smaller than the impact on another, strategically less important sector which would not develop without public assistance. Thus American railroad construction in the last decades of the nineteenth century would not have been, in spite of its decisive importance for economic development, a suitable target of a growth-oriented tax policy: private initiative thoroughly seized upon this sector and guaranteed intensive growth. During this period massive promotion for example of the chemical industry whose development lagged behind Europe, would have been more appropriate.

This argument touches upon the goals of any growth-oriented tax policy. If a sector's 'importance' for the development process yields only a first approximation for the determination of the benefits of tax exemptions, i.e. if the expected effect of the measure is only one criterion for the choice of the target sector, many priorities of taxation in the process of economic development have to change as soon as the intended changes in the behavioural patterns of the decision-makers are effected. Thus, a successful development policy plays only the role of a pacesetter; once certain new enterprises are established and investment and production decisions necessary for their existence and expansion have become daily routine, public promotion and financial protection can be dispensed with. The same applies if there are sufficiently many imitators grasping the newly demonstrated opportunities.[80] As a general rule, a further influx of entrepreneurs will result automatically once a small number of enterprises makes good profits. The promotion of a sector once it has been integrated into the economic structure can be discontinued, the more as particularly young branches of production usually grow very fast in the first years and decades of their existence until a certain degree of saturation of the market is reached.[81] Needless to emphasize that the withdrawal of temporary tax advantages does not necessarily lead to the shrinking of the respective sectors, as we can learn from the theory of educational tariff protection.[82]

V

Some concluding remarks may show, on the basis of empirical data, the 'sensitivity' to tax stimuli of a group of German smaller entrepreneurs and professionals. In summer 1963, the Cologne Centre for Research in Empirical Economics under the direction of the author analysed a group of some thousand German self-employed by modern methods of survey research. A whole battery of questions aimed at ascertaining the degree of utilization, on the part of the self-employed, of tax privileges explicitly offered to them by the tax law. Interestingly enough, more than half of them (54 per cent) were either unable or unwilling to name any such privileges, quite a few answers reflecting emotional issues (like 'compared to "Big Business" we have absolutely no opportunity to alleviate our tax burden'). A minority (14 per cent) of respondents enumerating concrete examples mentioned the possibility of saving taxes by fixing working expenses at their highest, supporting the hypothesis that reducing the liability may become a goal of its own, in the pursuit of which the economic principles of profitability and liquidity may be overruled by what might be called 'conspicuous consumption camouflaged by business expenditures'. Due to a rather low capital input yielding only a small basis for tax-reducing arrangements within their professional sphere, professional people preferred tax-privileged private savings (life insurance, savings through building and loan associations or under the Federal government's bonus scheme) to 'manipulating' working expenses.

On the whole, professional people appeared to be better informed about, and to take more systematic advantage of, tax privileges and loopholes than businessmen, especially than small traders and craftsmen. Although part of the difference may be due to the better general education and training of professional people facilitating better understanding of the complicated tax laws, the main factor seemed to be their generally higher incomes. A higher income demands better protection from taxation, thus stimulating its recipient to overcome the complexity and difficulties involved either in his own looking at the tax laws for possible loopholes, or in consulting a tax expert, whose advice yields better profits with rising incomes.

This result of our empirical study emphasizes anew the doubtfulness of an economic policy operating with global tax privileges which are not only used more systematically by the upper-income brackets but largely fail even to fulfil their original purpose, namely to provoke the most productive economic decision. This example demonstrates that the problem of enforceability is not confined to tax compliance; even nonfiscal goals of taxation, in so far as they are pursued by tax privileges, can be jeopardized if tax privileges do not reach their intended recipients because they presuppose a too high degree of economic rationality and abstract thinking.

Turning finally to economic decisions of the private household, the problem of occupational choice and local mobility has to be mentioned as a particular target of any effective development policy. If economic growth demands a certain preparedness of a population to give up its present way of living and working in favour of different, more profitable conditions,[83] a growth-oriented tax policy would have to try to influence these forms of mobility. In contrast to the many writers in the field of taxation who elaborately discuss the effect of taxation on the work effort on the basis of assumptions about 'rational' behaviour, the above-noted empirical data collected in four countries[84] suggest that there is hardly any indication of considerable incentive or disincentive effects of progressive income taxation; as George F. Break paraphrased Mark Twain, disincentives seem to be 'like the weather', they 'are much talked about, but few people do anything about them'.

Conclusion

An economic policy aiming at influencing economic decision-making[85] has to be defined in a threefold way: in respect of the *targets* of such policy entrepreneurs on the one hand, the households on the other – both groups to be divided in subgroups, in respect of the desired *behavioural effects*, and finally in respect of the *measures to be taken*. Whatever policy is chosen, the final criterion of every measure are the induced changes of actual behaviour.

Table 5.9 The breakdown of added value in manufacturing industry (%)

	Medium and small enterprises					*Major enterprises*				
	1960	*1961*	*1962*	*1963*	*1964*	*1960*	*1961*	*1962*	*1963*	*1964*
Net earnings	20.3	19.7	15.4	15.1	13.0	27.2	24.3	19.5	21.7	18.9
Personnel expenses	54.6	53.8	55.2	54.7	58.7	39.5	39.5	40.6	39.2	29.7
Cost of financing	11.2	11.0	12.7	12.7	12.4	13.5	14.3	16.9	16.9	17.1
Rents, taxes and imports	5.8	5.0	5.6	5.7	5.6	3.0	3.7	3.7	3.8	0.5
Depreciation	8.3	10.1	11.1	11.8	12.3	16.2	18.2	19.3	18.4	18.8

Table 5.10 Breakdown of an increase in the added value by factors (the annual average growth rate, %)

	Growth rate of gross added value	*Due to capital accumulation*	*Due to increase in labour*	*Due to technological progress*	*Due to interactions*
1956–59	16.9	9.0	3.1	1.0	3.8
	(100)	(53.3)	(18.3)	(5.9)	(22.5)
1958–62	22.1	11.1	3.9	2.9	4.2
	(100)	(50.2)	(17.8)	(13.2)	(19.0)

Remarks: By using the cross-section data for every year, we measured the Douglas function, and calculated these figures on the basis of the results of the measurement.

Global aggregates like 'total saving' and 'total consumption' have not been discussed in the preceding chapters because their real role in concrete situations of economic development is by no means clearly established.[86]

In contrast, the application of a development typology based on historic experience of successfully developed countries permits the discovery of 'strategic variables' or bottleneck sectors which, in a concrete situation, limit economic development; in other words, a tax-wise induced change here may have a more stimulating effect for economic growth than any variation of global aggregates. This approach consciously leaves behind the 'capital pool' concept which explains economic stagnation by the scarcity of capital and other resources.[87] Rather, a growth-oriented tax policy as advocated in this section starts out from the behavioural theory of economic development: development has the task to combine existing but misdirected resources and to induce people to achieve this combination. The implications of this approach are obvious: the belief that successful development policy can mainly be based on the husbanding of scarce resources such as capital and entrepreneurship is abandoned, while the route becomes clear for the concentration on behaviourally relevant 'inducement mechanisms' and 'pressures' (Hirschman). A whole field of research lies before us in the task to define the role of incentive taxation in this process.[88]

As shown by an analysis in the Economic White Paper for 1964, the increase of added value was largely due to contributions from capital (Table 5.9). As a result of investment in plants and facilities sparked by technological innovations, the productivity of labour showed a sharp increase (see Table 5.10).

References

Almond, G. and S. Verba (1963). *The Civic Culture Political Attitudes and Democracy in Five Nations.* Princeton.

Dubergé, J. (1961). *Psychologie sociale de l'impôt dans la France d'aujourd'hui.* Paris.

6
Psychology and Macroeconomics

Section 6.1, 'The problem of economic prognosis', was first published in *Universitas,* Quarterly English Language Edition 6 (1963/1964), pp. 155–63.

Section 6.2, 'The liquidity theory of money', was first published in *Kyklos*, 13 (1960), pp. 346–59.

6.1 The problem of economic prognosis

So far as the empirical sciences are concerned, prognosis forms the touchstone of any new theory. Whenever certain phenomena – let them be called 'causes' – are observed to be regularly followed by certain other phenomena ('effects'), any hypothesis purporting to establish a line of causality must be capable not only of explaining known past phenomena, but also of forecasting unknown phenomena in the future. Irrespective of the field of immediate concern – be it nature, medicine, the human soul, or the problems of human coexistence – the chief aim must always be prognosis, the final and decisive test of all discoveries in the fields of natural science, economics and sociology.

The concept of prognosis derives from the Greek *προγιγνώσχειν* (pre-recognition) as opposed to *προφητεύειν* (prediction or prophecy), and comes to us from the field of medicine. There it refers to an assessment of the probable course and end of an illness. Its success depends heavily on a correct 'diagnosis' having been made.

In economics, prognosis is not confined to the forecasting of pathological phenomena such as inflations and business cycles, but comprises all the phenomena inherent in the total economic situation. It may refer to a limited sector such as a specific firm or branch of activity, or it may be concerned with overall economic forecasts of long-term phenomena, such as the economic growth of a country, or of short-term phenomena, such as crises and booms.

To be considered scientific, a prognosis must be both oriented in reality and capable of objective description in the terminology of the science concerned. Furthermore, because a prognosis must be consistent with the hypotheses of the theory from which it springs, the assumptions underlying those hypotheses must obtain, and it must be possible to determine whether this is the case or not. On the other hand, it is hardly ever possible to determine in advance all the conditions required to bring about a future event, since they are frequently unknown, unrecognizable as such, or too numerous. As a rule, however, it will suffice to point out in the wording of a prognosis those conditions which are adequate to bring about the predicted event.

Every prognosis must include a specifically defined time dimension. The mere statement that a certain development, no matter how clearly delineated, will take place at some unspecified time in the future can, to be sure, never be disproved. But because of its lack of specificity it has no value as a prognosis.

The real problem faced by every prognosis is that one cannot know anything in the future. One can only assume or expect certain developments. Forecasts of future events are almost always based on data of the present and past. For example, future growth can be estimated by the method of 'direct extrapolation': if cement production has risen by 10 per cent annually during the last five or ten years, one can simply carry this figure over into the future and assume that cement production will continue to increase at the rate of 10 per cent per year – a very daring prognosis indeed!

The extrapolation method becomes somewhat more discriminating when it is applied indirectly, starting out from the factors which determine the variable to be predicted, in this case the future demand for cement. Such factors as housing starts, highway construction and industrial investment might serve as primary determinants. Necessary assumptions are that these determinants will in future continue to influence the variable to be forecast, and with the same effect as in the past. But the governing factors themselves are not isolated phenomena. They in turn depend on other influential factors, which themselves must be determined and 'extrapolated'. Thus begins a chain of causality which of necessity must be broken off somewhere if a concrete result is to be obtained. Moreover, it is highly unlikely that all relevant governing factors can be evaluated. Instead, one must usually limit oneself to one or two of the most significant.

Extrapolation always involves a tacit assumption that the variable to be forecast, or its primary determinants, will follow the same general pattern of change as in the past. But this assumption immediately becomes questionable when it is realized that economic processes are the result of human activity, and thus are dependent on human decisions. This applies equally to production figures, prices, inventory changes and also, to an ever-increasing extent, to the factors of supply and demand. If it is to be meaningful, economic prognosis cannot simply ignore the human decisions and plans on which, in the last analysis, money and goods transactions are based. Nor can decisions and plans be treated as inflexible guides for future behaviour. On the contrary, prognosis must of necessity supply a prediction of future behaviour. It must concern itself with human activity and with the individual motivations, social norms and sociological factors which influence that activity.

The 1933 prognosis for the German electric power sector, which the Reich's Ministry of Economics used as a basis for its planning, provides an excellent example of just how precarious long-term forecasts based on nothing but chronological cycles can be. Using the extrapolation method, economic experts predicted that the consumption of electric power, which amounted to 16 billion kilowatt hours in 1930, would double by 1960, i.e. would reach a total of 32 billion kilowatt hours. In reality, more than 116 billion kilowatt hours of electricity were consumed in the Federal Republic alone in 1960, in other words more than seven times the volume of 1930. Erroneous forecasts of this type were also made in connection with the so-called 'Long-term Plan' for the Federal Republic, and in many other countries as well.

A prognosis may also be arrived at through 'induction'. If past experience indicates that a certain event reliably takes place at regular intervals, one may conclude that it will also occur at a corresponding time in the future. This was the principle underlying a number of 'business barometers' developed during the 1920s. The best known of these was the Harvard barometer, consisting of three time series curves: the 'stock market' curve, the 'commodity market' curve and the 'capital market' curve. The stock market curve reflected the prices of a number of stocks and the turnover of the New York banks. The commodity market curve was based on the production of pig iron and the wholesale price index. The capital market curve included the discount rate, bank loans and bank deposits. Over a relatively long period it had been observed that the peaks of these three curves had followed one another at recurrent intervals. Therefore, on the basis of the stock market curve, Harvard predicted the general business trend reflected in the other curves.

A further method of prognosis is based on analogy. It can be applied in cases in which two environments (for example the United States economy and that of the Federal Republic) are similar in structure and activity, but with the difference that one is ahead of the other in chronological development. What we have here is a so-called 'phase shift'. This approach to prognosis might indicate, for example, that the per capita consumption of important industrial products such as plastics or aluminium will probably increase in the Federal Republic, or that the number of automobiles is likely to become larger. The method also provides some indication of the probable extent of these increases.

Even in communist countries, economic prognosis and planning are based in part on analogies to the economic development observed in Western nations. For example, the Hungarian economist Stefan Varga has made the following statement: 'On the basis of the consumer structure of the prosperous capitalistic countries, the socialist nations are able to predict the future trend of demand among their peoples once the economic gap has been closed.' Analogy-based conclusions of this kind between nations at different stages of development may be rather dangerous, since they are necessarily unable to take into consideration many disparities in economic structure, in the atmosphere of economic development, and in the character of the peoples concerned.

Econometrics, which concerns itself with the observation and measurement of economic cycles and with the interaction of macroeconomic factors, derives its conclusions from a method similar to that of analogy just described. It operates on the assumption that the relationship between certain measurable consequences of economic activity, such as net personal income, government purchases of goods and services, employment and exports, will correspond in general to that noted in the past. It automatically applies the estimated change in some of these indicators to all the rest. The meaningfulness of such forecasts is slight, since the method used deals with the relationship between global values and ignores such factors as human expectations, human behaviour and human decisions. Thus the econometricians failed completely in their forecast of the course of business activity in the post-war United States. The depression they predicted never took place. They believed in the infallibility of Keynes's 'consumption function', according to which that part of income which is not consumed must increase not only absolutely but also relatively when income is on the rise. Instead, the end of the war and the flush of victory released a tremendous wave of consumption in the United States. Under its influence, economic growth continued undiminished, focused on consumer goods rather than armaments.

All of these mechanical and mathematical methods of prognosis are suited only to the forecasting of uniform and persistent trends, such as may occur in cases of structural shift or general economic growth. They are destined to be useless in the prediction of changes in the business situation, since they take into account only 'purely economic' factors and their relative significance. While fluctuations in the economic situation may not be brought about exclusively by human reactions, these factors both intensify and limit the scope of such fluctuations. In other words, changes in the economic situation are to a large extent independent of rational economic reckoning.

According to W.A. Jöhr, for example, production and investment decisions of manufacturers depend to a large extent on their expectations of future markets. But at the same time, they are also influenced by political and social developments and even by their own psychological make-ups. All of these factors may assume the character of reinforcing impulses and, if they are sufficiently strong, may have a contagious effect on the decisions which other manufacturers must make regarding the direction and scope of production.

Consequently, business forecasting, more than any other branch of economic research, must remain a science of predicting human behaviour. In this it is dependent upon socio-economic behavioural research, the youngest branch of the economic sciences.

It is well established that while relatively short-range predictions of human economic behaviour may be more or less reliable, any attempt to lengthen the period will necessarily risk a decrease in accuracy. With short-term prognosis, one may assume that the variables to be forecast – such as production, inventories, price increases – will be guided by plans. Thus it is relatively easy, for instance, to predict accurately the scope of an imminent increase in textile inventories if one is familiar with the order books of the textile industry. Naturally, there will always be subsequent minor cancellations and orders, but these can be allowed for in the prognosis on the basis of past experience. On the whole, plans once made are actually carried out, at least in their broad outlines, unless new and unexpected factors intervene. If there is a relatively long planning stage between the original decision and its ultimate achievement, as for example in the building, shipbuilding and machine tool industries, then relatively long-range predictions may be quite reliable.

Thus the investment programmes of larger industrial firms, which are usually set up for a two-year period, provide valuable data for medium-term forecasts. Every autumn, McGraw-Hill, the American publishers of *Business Week* magazine, conducts a poll of representative American industrial firms in which the most important questions asked are those concerning amounts scheduled for investment. The report states explicitly that whether or not these plans will be realized depends on general economic developments, on the trend of profits and on government policies. Nevertheless, it can be determined in advance whether industrial investment will exercise an autonomous expansive or contractive influence upon the business situation as a whole.

Surveys of consumer purchasing plans have also proved to be valuable aids in the prediction of business trends. Professor Katona of the University of Michigan has developed this method over the course of the last 20 years. In highly industrialized societies, high-priced durable goods have accounted for an increasingly large share of total consumer demand. Any forecast of the sales of such goods must take the following three factors into account:

1. Durable consumer goods satisfy a demand which can be postponed. For example, it is entirely up to the consumer to decide whether he will replace his car in two years or four years, or exactly when he will buy a television set or phonograph.
2. Durable goods purchases ordinarily represent such large expenditures that the question of whether or not to buy is usually discussed for months or even years in advance, and is sometimes even an item of family budget planning.
3. The acquisition of durable consumer goods cannot be classified as either savings or consumption. It might best be described as ‘consumer investment’, and furthermore an investment which can be financed through consumer credit, thereby giving the consumer a certain leeway as regards payment.

The contribution of behaviour research to the forecasting of business trends goes far beyond analyses of purchase and investment planning by consumers and manufacturers. It is possible to orient purchase and investment predictions much earlier in the decision-making process, before actual plans to purchase or invest are formulated. As soon as there are signs in the form of individual motivations, moods, attitudes, social norms, and the sociological interplay between these, predictions become possible. This enables a highly desirable lengthening of the interval between the prognosis and its anticipated fulfilment. But at the same time, it may entail a decrease in the stability of the conditions on which the prognosis is based. Moods change very quickly; clearly delineated plans, on the other hand, will usually be abandoned only when decisive changes make it unavoidable.

Katona's 'index of consumer attitudes', developed through decades of experimentation with making short-range predictions of consumer durable goods sales, is based on answers to the following questions, asked repeatedly of representative cross-sections of the American public:

> Would you say that at present, business conditions are better or worse than they were a year ago?
> Do you think that during the next twelve months we'll have good times financially, or bad times, or what?
> Would you say that you and your family are better off or worse off financially than you were a year ago?
> Speaking of prices in general, I mean the prices of the things you buy – do you think they will go up in the next year or so, or go down, or stay where they are now?
> About things people buy for their house – I mean furniture, house furnishings, refrigerator, stove, TV, and things like that – do you think now is a good or a bad time to buy such large household items?

The index of consumer attitudes developed from the replies to these questions has been far better able to forecast retail sales of durable goods than has the global factor 'disposable personal income'.

The other branch of business forecasting, i.e. the analysis of producer behaviour, has also been concerned with the investigation of attitudes and expectations. The Ifo-Institute of Economic Research in Munich sends out a monthly business questionnaire to a number of representative firms in the Federal Republic. Factual queries are supplemented by questions concerning attitudes and expectations, such as (1) expectations for the coming month: productions goals, the trend in orders, and selling prices; and (2) expectations for the next six months: selling prices, and the influence of the economic climate on the trend of business.

No matter which method of prognosis one selects, it must be realized that none of them is perfect or infallible. Specifically, no method allows for such external factors as wars, crop failures, strikes, etc., in the prognosis. These imponderables simply cannot be eliminated, not even if it were possible (perhaps by a skilful combination of all the above-mentioned methods of prognosis) to perfect the forecasting technique and to assess more precisely the dependence of individual economies on the world economic situation. Finally, some additional factors of uncertainty depend upon whether the prognosis is kept secret. If it is made public, then any individuals who are in a position to influence the indicators used in making the prognosis will be able to adjust their activities accordingly. Publication may contribute to the fulfilment of the prognosis, or, conversely, the affected individuals may react so that the forecast invalidates itself, forfeiting part of its accuracy or entirely failing to come about.

If, for example, an election forecast predicts that Candidate A will win, then he will automatically thereby gain additional votes, provided that a 'bandwagon' mentality prevails among the undecided sector of the electorate. In this case then, the forecast contributes to its own validity by virtue of its having been made public. But if, on the other hand, undecided voters are influenced more by feelings of sympathy for the underdog, or by a conviction of moral obligation to add to the votes of another candidate who might otherwise be defeated, then the published prediction that Candidate A will win might well destroy whatever chance he would have had if the forecast had been kept secret.

The situation is similar in the field of economics. If a security analysis firm whose forecasts are widely circulated predicts that the price of a certain stock will go up, then many recipients of the forecast will purchase that stock. As a result of the increased demand, the price will indeed rise, at least temporarily. Similarly, a predicted decline in the price of a stock may lead to intensive selling, so that the prediction actually comes true even though originally based on nothing more than conjecture.

This kind of result can also be observed in the field of business forecasting. On the basis of the expectations and plans of manufacturers, the Munich Ifo-Institute publishes a report reflecting past and expected future business developments, broken down by individual sectors of the economy. A poll of businessmen participating in the survey has indicated that approximately 90 per cent of the firms take the information in the reports into account in making their decisions. A businessman regards the attitudes and activity of 'the others', i.e. his competitors, as a useful guide in making his own decisions. The fact that the expectations of others, when considered objectively, are no more certain than his own makes no difference.

Thus business prognoses can intensify positive or negative expectations with regard to the trend of business, an effect which in itself can have a substantial influence on economic developments. Or, a prognosis may have exactly the opposite effect, as in the case of the election forecast already mentioned. A forecast of runaway boom or of decline may, for example, lead to countermeasures on the part of the central bank, or the government, and thus not be fulfilled. Whether or not, and to what extent, a prognosis may contribute to its own invalidation can hardly be decided at the time it is formulated. Only in theory can a kind of superprognosis be imagined, which would take into account right from the beginning the factors which might alter it and their presumed repercussions.

For the individual businessman, prognosis is an important tool of business planning, a tool whose usefulness increases in proportion to the extent to which the prognosis deals specifically with conditions in his sector of industry or is oriented towards his particular firm. A timely prognosis may enable him to adjust his behaviour to the forecast developments. In addition, a firm which is powerful or has a monopoly in a given market can resort to such measures as advertising campaigns or price fixing in an attempt to influence that market, thereby invalidating an unfavourable forecast of the sales of its products.

Similarly, the government may be content to accept a prognosis of economic development at face value, utilizing it only as a basis for predicting tax revenues and planning government expenditures. The modern welfare state, to be sure, will usually not be satisfied to be merely a spectator in the face of threatening adverse economic developments, but will mobilize its arsenal of measures designed to stimulate the economy, in an effort to nip the adverse development in the bud.

In this context, economic forecasting is nowadays an indispensable aid to those who formulate government policy. It can be used all the more effectively the more its limitations are realized, and the more the many problems inherent in its application are faced realistically. The human factor in economic life is not entirely impervious to prognosis. But it remains 'unpredictable' to say the least. That this is so, and will doubtless remain so, reflects the nature of our liberal economic system as contrasted with the regulated economies of the communist world.

6.2 The liquidity theory of money

In this world of change the explanation of facts sometimes lags far behind the actual development of facts; some phenomenon has changed, but the human mind has failed to respond to such change by preparing, in time, an adequate explanation of the new state of things, let alone of the change as such and its causes.

This seems to be the case with the theory of money in this world of changing monetary conditions. While the so-called quantity theory served as a rather adequate explanation of the quantitative relations between the circulation of coins and/or banknotes and the price mechanism in the age of metallic currencies, the more recent development of paper money and the increasing role of other forms of payment besides hard cash has not yet been followed by theoretical concepts able to explain the creation of such money and its effects on the economy as a whole.

'Money in account' or deposit money[1] is created not by government authority but by the credit process itself; credit appears in the wake of general business confidence, profit expectations and hopes, while it disappears, on the other hand, by distrust, frustrations and disappointments in the business world. 'More' or 'less' credit means, therefore, an equal amount of more or less deposit money; the power to create such money reflects, in particular, the power to grant credits entrusted to the banking system of the modern economy.

Given this new state of things, any mere quantitative explanation of the effects of 'money' upon the economy as a whole, which disregards the credit-created 'money in account', appears to be inadequate; there is no quantitative measure of the aggregate hopes, expectations or frustrations of bankers, debtors and investors, nor can the formal transactions in 'money of account' reflect their true character be it as credits, mere transfers or even repayments of debts finishing former credit creations. Such money, in other words, does not, as do coins and notes in circulation, reflect someone's ability to purchase or 'purchasing power', adding up in the whole of the economy to something like the aggregate demand. This form of money belongs, rather, to an abstract sphere of mere financial transactions wide apart from the commodity markets and real investments; its relation to the general business situation is more of a qualitative than of a quantitative nature. Coins and notes, on the other hand, nowadays are used only for a decreasing part of total payments, their quantity being a consequence rather than a cause of business activity; even in this sector of monetary transactions, the quantity theory of money leads us astray as regards the question of cause and effect of such activity. True, this deficiency has been seen already among the very founders of the quantity theory itself; Bodin's[2] and Davanzati's[3] original concept of a proportional relation between the price level and the amount of money in circulation has been corrected and modified by John Locke[4] and Cantillon[5] introducing the problem of hoarding, later developed to the rather dubious term of 'rapidity' or 'velocity' of circulation as an independent factor rendering the same amount of money more or less 'efficient' as regards the general price level. While hoards of coins and notes were rightly excluded, by this modification of the quantity theory, from the monetary scene, this explanation did not cover the problem of credit-created 'money in account' at all; the turnover velocity of bank accounts, while indicating the financial activity of individual owners, does not, in any way, reflect the quantity of the aggregate demand on the commodity or investment markets.

Knut Wicksell,[6] writing in the last years of the nineteenth century, ridiculed the idea of a 'velocity of circulation' by the remark that coins and notes, having no legs, were not able to 'circulate' by themselves; thereby, finally, human behaviour was brought into the picture as one independent factor of the monetary equilibrium. The urge for quantitative analysis, however, proved stronger than this hopeful approach, and the quantity theory of money was modified, in a further step of adaptation, to the so-called income theory, relating not the volume of money, but money incomes to the aggregate demand; higher incomes, if used for purchases of all kinds, would create a higher aggregate demand, thereby increasing, *ceteris paribus*, i.e. in front of an unchanged quantity of goods, the general price level.

This 'income theory' of money, as developed by Aftalion,[7] von Mises[8] and Zwiedineck-Südenhorst,[9] was quite useful as regards the relations between supply and demand on one side, the price mechanism on the other; but these relations no longer belong to the legitimate realm of the theory of money. Alvin H. Hansen[10] has pointed out that the effects on the price level, if any, are not caused by income, but by expenditure; only such part of the income as is actually used for purchases of all kinds, forms part of the aggregate demand in this equation, which is well known in the price theory, but has nothing to do with the theory of money at all. The fraction of any newly created money which will, in final analysis, show up in increased incomes, let alone in expenditures financed out of such incomes, cannot be forecast except by an exact knowledge of the behaviour of consumers, savers and investors; instead of focusing attention on such investigations, however, the urge for quantitative analysis misled most writers to look further into the dubious equations of total volume of money, money volume minus idle balances, and turnover velocity, and, on the other hand, the 'total monetary demand', which is nothing other than the 'general demand' of the price theory.

That it is not the volume of money in circulation, but the use made of incomes which affects the markets and, in final analysis, the general price level, was proved by the big experiments of inflation during both world wars. In 1914–18, the volume of banknotes in Germany was increased more than twentyfold, while practically no rise of the general level of prices was felt; later on, prices rose faster than the further increases of the volume of money, so the printers could not keep pace and money was scarce in relation to the prices to be paid. Not how much money was in circulation, but what people did with the money really mattered; as long as war bonds were bought in the hope of final victory, no reaction on the commodity markets of the increased volume of money could be seen.

In spite of these experiences, which were repeated, on a smaller scale, in the Second World War in many countries, the concept of the 'volume of money' responsible for the general price level was maintained as a standard explanation of the money economy; few writers even took the pains to define their concept of 'volume of money', let alone of asking themselves if summing up of all coins, notes and bank accounts made sense as an aggregate of homogeneous elements. In case of doubt, the magic formula of 'turnover velocity' lent itself to the explanation of any gap in the money–commodities balance; if the general price level had changed, either the volume or the velocity of circulation money (including 'money in account') seemed to be responsible. This theory culminated in Irving Fisher's[11] idea of a money illusion, ridiculing everybody who looked upon changes in the general price level as 'price' fluctuations instead of fluctuations in the value of money; even the 'so-called business cycles' were, in Fisher's own words, nothing else than a 'dance of the dollar'.[12]

In the meantime, the great crisis of the 1930s has shown that business depressions accompanied (but not caused) by deflationary processes really exist; on the other hand, the role of money in the ups and downs of business remained, for most of the writers, rather nebulous. In the United States, the words 'inflation' and 'deflation' even became synonymous with boom and depression; in 1951, a Department of Commerce report announced that inflation and deflation prevailed side by side in the American economy, divided between a boom in the armaments field and a slump in the market of consumer durables. European writers, while avoiding such open abdication of monetary theory, retreated behind the idea of business cycles influenced by autonomous fluctuations of money if not in volume, but in 'velocity of circulation', whatever this meant; while some lip service was paid to the refusal of the quantity theory of money no other explanation of changes in the general level of prices was offered.

In this state of things, attention may be drawn to a new and better explanation which has been developed step by step by some European writers and experts in the field of money and banking. Instead of 'quantity theory' I might propose to call it the 'liquidity theory' of money as liquidity is the basic concept linking the general business activity with monetary conditions; our term 'liquidity' is, however, not restricted to banking institutions, whose liquid assets remain strongly connected with their access to central bank money and, thereby, again to the so-called 'volume of money'. The general business activity is, rather, influenced by the general business liquidity in cash, bank accounts and credit facilities as well; in Germany, Otto Veit[13] has proposed a concept of business liquidity including even stocks in trade and other easily saleable business assets besides accounts receivable, credits available and other financial assets. This widens the liquidity concept from the mere cash and bank account (first-grade liquidity) to a second and third degree of 'liquidity'; in our money economy, most commodities, claims and accounts receivable can be mobilized and functionalized by financial titles. 'Thus a tendency to increasing liquidity is a natural consequence of the development of the financial system.'[14]

Not the 'supply of money', therefore, but the liquidity position of business is the main factor of general business activity. According to the Radcliffe Report[15] it is 'the whole liquidity position that is relevant to spending decisions'. The Radcliffe Committee's interest in the 'supply of money' is only due to the latter's significance in the whole liquidity picture: 'The ease with which money can be raised depends on the one hand upon the composition of the spender's assets and on his borrowing power and, on the other hand, upon the methods, moods, and resources of financial institutions.'

If used in this broad sense, liquidity or 'the ease with which money can be raised' depends not only on the quantity of liquid assets available but on 'borrowing power', i.e. profit expectations, hopes and moods as well; the famous remark of the late S. Goldenweiser 'money is a state of mind' is recalled by the proposition of the Radcliffe Report that the liquidity status of the business firm depends on 'the amount of money people *think* they can get hold of, whether by receipts of income (for instance from sales), by disposal of capital assets or by borrowing'.[16]

This individual liquidity position, which is relevant to spending decisions, is a predominantly psychological concept; it is one of the motivational elements influencing investments, expenditure, saving and credits. J.M. Keynes's term 'liquidity preference' has been developed by the German economist A. Paulsen[17] to a concept of 'freedom of economic decision'; in fact, the 'liquidity conscious buyer' is prone to react more freely to any offer than his less liquidity conscious competitor, to say nothing of the insolvent one.

In general, the ease with which money can be raised influences buyer and investor moods in private and public households as well, encouraging purchasing and investing which would have been avoided or postponed in the case of a strained liquidity position. To analyse the liquidity concept somewhat more exactly, there may be discerned between an 'objective liquidity', including actual liquid assets and credit facilities available, and some sort of 'subjective liquidity', depending upon personal preferences or prestige considerations; if social status or group standards restrict the use of certain forms of credit, e.g. drawing or accepting bills in order to raise money, such restricted liquidity remains more or less lower than the 'objective' one. The amount of money people think they can get hold of without touching the limits of their personal or group standards may contribute, in turn, to a general buying mood, mirroring profit or utility expectations, and spreading by 'psychological contagion' to wider circles of business and banking. Bankers, on the other hand, may be induced, by such developments, to grant credits more freely, in the limits of their own cash liquidity, thereby contributing again to an increased 'general business liquidity' by creation of new 'money in account'. Reciprocally, expectations and liquidity considerations act upon each other, increasing or decreasing the general business activity and individual buying or saving decisions.

This psychological nature of the liquidity position of businesspeople explains, on the other hand, the impossibility of adding up all individual 'liquidities' to an aggregate business liquidity in the economy as a whole; instead of an 'aggregate' liquidity as a quantitative measure, the economy is qualified, at the time being, by its actual 'average' liquidity, visible in a trend of rising or declining business activity.

No matter if such a wider concept of liquidity could be adopted generally or not, the change from 'quantity' or 'supply of money' to 'liquidity of business' as the main determining factor of the aggregate demand seems fully justified. Indeed general business activity is influenced by liquidity considerations, not only of the first degree but in a wider sense; on the other hand, business activity again may be able to create the necessary credits for financing investments and other purchases on the commodity markets. If this is accepted, liquidity no longer remains a quantitative amount of cash or readily cashable assets but a quality of the general business situation, allowing its owner, in a certain degree, a larger or more restricted freedom of economic decision. The 'liquidity theory of money', then, may help to explain not only the connections between the money flow and the aggregate demand, but between 'money in account' and credits as well, showing this form of money to be not a cause but an effect of business activity, expectations and credit.

The monetary theory, reduced by the quantity theory almost to complete abdication, returns to life by the introduction of liquidity as the 'missing link' between money and aggregate demand. To define the latter by the volume of 'active' money including its 'velocity of circulation' was nothing but a mere truism; the amount of money used to purchase goods and services of all kinds is, naturally, identical with the aggregate demand in terms of money. The liquidity approach restores to the monetary theory the dignity of causal explanation instead of pure tautology; not to establish quantitative, but causal relations is the principal aim of theoretical reasoning. The analysis of general business liquidity not only helps to explain the functioning of monetary and market relations but, as the Radcliffe Report remarks, again 'directs attention to the behavior and decisions that do directly influence the total level of demand' (p. 133).

A simple test of the explanatory value of the liquidity approach can be made in the field of inflation analysis, compared with the quantity theory of inflation. While the latter explains the rise of the general price level merely in terms of the so-called volume of money, modified by the velocity of circulation, the liquidity theory analyses real behaviour factors determining the actual decisions of savers and buyers; P.L. Reynaud's theory of psychic 'thresholds' has shown how the discovery of a diminishing value of money, lagging far behind the increase in the volume of notes issued, is spreading like a contagious inflation, gaining momentum once the 'threshold' is crossed until the stability of the currency is completely ruined.[18] This biological analogy helps to explain the process of inflation better than any quantitative comparison between 'volumes' (of money compared with goods and services); moreover, it allows us to look into the actual process of decision-making of individuals, households and firms induced by their abnormal liquidity not only to buy more goods and services but even to prefer real assets to their abundant and overabundant liquid assets threatened by progressive depreciation.

Even in 'normal' times, when the 'money illusion' is left undisturbed by galloping inflation, the liquidity theory of money explains better than the quantity theory the connections between the financial dispositions of consumers, investors and savers as well as, on the other hand, the corresponding price and market reactions. In the early stages of a boom, no conspicuous rise in the general level of prices is visible; in fact, a decline of prices has been observed together with an increasing supply of money. On the other hand, increasing liquidity can be observed in business circles, strengthening investment and expanding the volume of 'money in account', i.e. enhancing the financial activities. The source of such increased liquidity may be found, upon further investigation, in improved market conditions, higher profit or sales expectations, whether justified or not, and/or in mere moods resulting in widespread business optimism; in any case, no previous increase or acceleration of the money supply is a necessary condition of such increased liquidity which, in turn, may result in expanding credit lines and intensifying financial transactions in 'money in account'.

Liquidity disappears, on the other hand, by pessimistic business expectations, e.g. by spreading fears of diminishing profits, labour conflicts or other difficulties; if the wider concept of liquidity mentioned above is adopted, any price reductions or the very fear of such may diminish the actual 'liquidity' of producers, dealers and retailers, let alone their credit facilities affecting, in turn, their scope of financial dispositions. Buying orders and investment decisions are reduced, restricting in turn the profit expectations of business partners, and their 'liquidity'; every action results in corresponding reactions, inducing a cumulative process upward or downward. The underlying forces of such changes in business activities, expectations and moods, are not to be discussed here, as we are concerned only with monetary, not business cycle theory; given the fact of changing business conditions, the task of the monetary theory is restricted to an analysis of their interdependence with monetary factors, i.e. the resulting changes in general business liquidity in the sense described above.

The decisive merit of the liquidity theory of money may be found not only in a better explanation and description of interdependent business, price and market conditions in a modern money economy but in its usefulness for a better understanding of the scope, means and limits of monetary policy. As soon as liquidity considerations are accepted as primarily influencing business decisions, credit conditions and financial dispositions, the working of central bank policy may be rendered better observable, and it may actually be improved by a better understanding of its functioning and limits. Bank rate changes, for instance, long ago were considered as acting mainly on the psychological or motivational factors of business activity; Wesley C. Mitchell[19] claimed the psychological effect of bank rate changes to have been, in the United States, the only undisputed way of influencing the business situation by monetary measures, and Randolph Burgess,[20] one of the leading economists of the Federal Reserve System in its early years, found the psychological effect of the bank rate 'probably its most important effect at all'. Changes of the bank rate act, in any case, by way of 'signals' or traffic lights indicating the dangers of the way ahead;[21] in the liquidity approach, they would regain in importance as acting directly on business expectations, the very foundation of business liquidity in its wider meaning.

Open market operations, on the other hand, as well as the variations of reserve requirements, act primarily upon the first-grade liquidity of the banking system, thereby modifying credit conditions, one of the elements of general business liquidity; central bank 'moral suasion', combined, if possible, with announcements of fiscal policy impending, may prove one of the most powerful instruments of monetary policy if used at the right time and measure.[22]

Again to quote the Radcliffe Report, it separates the interest incentive effect and the general liquidity effect of central bank measures. 'The contrast, however, is incomplete, for we shall argue that movements in the rate of interest have a central part to play in bringing about changes in liquidity.' In conclusion, the Radcliffe Committee stresses the point that 'it is the liquidity of the economy, rather than the 'supply of money', that the authorities should seek to affect by their use of monetary measures'; while the Committee 'did not find convincing evidence of the presence, in recent years, of the so-called interest incentive effect of the Central Bank rate', the availability of funds to borrowers is assessed as the main factor of purchase and investment decisions, for 'if the money for financing the project cannot be got on any tolerable terms at all, that is the end of the matter'.[23]

Monetary policy, as a matter of fact, used to rely much more on its impact upon general business liquidity rather than upon interest rates or the volume of credit than was generally conceded; the liquidity theory of money seems able to explain, in simple terms of cause and effect, that controlling liquidity means controlling business activity, which in turn controls the 'supply of money' including 'money in account'. For the purposes of monetary policy, observation of the general liquidity position is fundamental; neither the price index nor *ex post* statistics of the volume of money but the trend of profit expectations, investors' and buyers' moods and the general status of business confidence are the relevant factors to watch for and to control by monetary policy. In order to provide the necessary measures at the right time and in the right degree, close observation of the behaviour of the business community is necessary; if liquidity means individual freedom of economic dispositions, the probable trend of such dispositions cannot be predicted except by behavioural study of the business community. Such studies have been going on for more than a decade in the United States,[24] sponsored by the Federal Reserve Board; in Germany, survey research investigations of consumers' and savers' behaviour, credit habits and liquidity preferences were started some years ago by the Cologne Centre of Empirical Economic Research. More and better knowledge of individual behaviour, financial dispositions of firms and patterns of credit and debt are needed in order to understand the different standards of liquidity, including the propensity to take and grant credit; the method of behavioural research (*Verhaltensforschung*) seems most promising as a preparatory step for such knowledge.[25]

It would require more than the limited space of a journal article to analyse in detail the implications of the liquidity approach for monetary policy; the discussion about the Radcliffe Report is in full swing. In the long run, there seems to be some reason to hope for a better understanding, timing and dosing of central bank measures by using the liquidity approach instead of the outmoded quantity theory and its relicts.

Notes

1 Introduction

1 Niemirowski et al. (2001) present a historical overview of 30 years of tax compliance research in economics and social sciences.

2 Economic Psychology

1 L. Robbins, *Essays on the Nature and Significance of Economic Science*, London 1932, p. 83.
2 Ibid., 2nd edn, London 1937, p. 83.
3 Joan Robinson, *Economics is a Serious Subject*, Cambridge 1932, p. 10.
4 St. Chase, *Die Wissenschaft vom Menschen* [The Science of Mankind], Vienna/Stuttgart 1951, p. 287.
5 Schachtschabel, *Introduction to A. Smith, Theorie der ethischen Gefühle* [Theory of Moral Sentiments], Frankfurt 1949.
6 Von Holzschuher, *Praktische Psychologie, Die Primitvperson im Menschen* [Practical Psychology, the Primitive Person in Man], Seebruck am Chiemsee 1949. ‘But we must energetically confront the fearful simplification for which “hedonist teaching” has striven, which wanted to see all feelings reduced to feelings of preference and indifference, which alone should determine what a living creature does and does not do.’ It ‘should not be overlooked that man is characterised precisely by his self-control in respect of feelings of preference and indifference. In contrast the hedonistic “doctrine of pleasure” promotes the philosophical point of view that whatever preference provides is good and that sensual and intellectual preference is the sole objective of human endeavour and the greatest good!’
7 W.C. Mitchell, The prospects of economics, in *The Trend of Economics*, New York 1924, pp. 14 et seq.
8 H. von Stackelberg, Die Entwicklungsstufen der Werttheorie [Stages in the development of value theory], *Schweizerische Zeitschrift für Volkswirtschaft und Statistik*, vol. 83, no. 1 (1947).
9 In econometrics, this retreat is expressly justified by the psychic events being imponderables and therefore not quantifiable; economic science mainly concerns itself however with measurable phenomena. ‘Even if expectations as such perhaps cannot be measured, their influence may only be expressed in the form of measurable phenomena. This fact alone interests us’ (J. Tinbergen, *Einführung in die Ökonometrie* [Introduction to Econometrics], Vienna 1952).
10 Mitchell, Prospects of economics, pp. 14 et seq.
11 G. Myrdal, *Das politische Element in der nationalökonomischen Doktrinbildung* [The Political Element in the Development of Economic Theory], Berlin 1932, p. 20.
12 Ibid., p. 147.

13 H. Mackenroth, Diskussionsbeitrag von Mackenroth, in *Probleme der Wertlehre* (*Diskussionsband*), *Schriften des Vereins für Socialpolitik* 183/2, pp. 67/81.
14 Gisbert Rittig, Die Indeterminiertheit des Preissystems [The indeterminate nature of the pricing system], *Jahrbuch für Sozialwissenschaft*, vol. 1, no. 3, and vol. 2, no. 1.
15 F. Perroux, Esquisse d'une théorie de l'économie dominante, in *Économie appliquée, Archives de l'Institut de Science Économique Appliquée*, April 1948.
16 E. Ronald Walker, *From Economic Theory to Policy*, 2nd edn, Chicago 1947, p. 77.
17 Ibid., p. 75.
18 J. Marchal, Gegenstand und Wesen der Wirtschaftswissenschaft [Object and nature of economic science], *Zeitschr. f. d. ges. Staatswissenschaft*, no. 4 (1950), p. 599.
19 Ibid., p. 585.
20 Oelrich labels the typical 'economic human' as follows: 'For economic humans the satisfaction of needs according to the law of the greatest efficiency stands between the ego and the world. With regard to this goal there is always an irrational conflict with the environment. Knowledge or recognition that is not usable in terms of usefulness, has no permanence for economic humans or it is transformed for his purposes' (*Geisteswissenschaftliche Psychologie und Bildung der Menschen* [Humanistic Psychology and Human Education], Stuttgart 1950, p. 125).
21 Chase, *Wissenschaft*, p. 287.
22 O. Morgenstern, Vollkommene Voraussicht und wirtschaftliches Gleichgewicht [Perfect foresight and economic equality], *Zeitschr. f. Nationalökonomie*, vol. VI, Vienna 1935.
23 J. Huizinga, *Homo Ludens, Versuch einer Bestimmung des Spielelements der Kultur* [A Study of the Play Element in Culture], 3rd edn, 1952.
24 Th. Schieder, Der Typus in der Geschichtswissenschaft [The type in the science of history], *Studium Generale*, vol. 5, no. 4 (1952).
25 J.R. Hicks, Gleichgewicht und Konjunktur [Equilibrium and business cycle], *Zeitschr. f. Nationalökonomie*, vol. VI, Vienna 1935.
26 Morgenstern, Vollkommene Voraussicht.
27 J.M. Clark, Some current cleavages among economists, *American Economic Review*, vol. 37, no. 2 (1946).
28 A. Gehlen, *Der Mensch, Seine Natur und seine Stellung in der Welt* [Man, His Nature and His Place in the World], Berlin 1940, pp. 354 et seq.
29 Ibid.
30 See for example Ruth Benedict, *Patterns of Culture*, especially Ch. 1, 'The Science of Custom', and Margaret Mead, *Sex and Temperament in Three Primitive Societies*, London.
31 In this context see Ludwig Landgrebe, *Phänomenologie und Metaphysik* [Phenomenology and Metaphysics], Hamburg 1949, pp. 22 et seq.
32 See for example Allan G. Gruchy, *Modern Economic Thought, the American Contribution*, New York 1948; here the author deals with the six most significant representatives of institutionalism, shows their fundamental philosophical and socio-psychological concepts and finally summarizes the main content of their theories.

33 B. Malinowski, *Mutterrechtliche Familie und Ödipuskomplex, eine wissenschaftliche Theorie der Kultur u. a. Aufsätze* [Matriarchal Familie and Oedipus Complex, a Scientific Theory of Culture and other Essays], Zurich 1949, pp. 209 et seq.
34 See also in relation to sociology and depth psychology Gottfried Eisermann, Die soziologischen Beziehungen der Tiefenpsychologie [The Sociological Relationships of Depth Psychology], in *Gegenwartsprobleme der Soziologie* [Contemporary Sociological Problems], Alfred Vierkandt zum 80. Geburtstag, Potsdam 1949.
35 A. Gehlen, *Sozialpsychologische Probleme der industriellen Gesellschaft* [Socio-Psychological Problems of Industrial Society], Tübingen 1949.
36 A. Lersch, Die Strebungen des Menschen, *Zeitschr. f. philosophische Forschung*, vol. IV, p. 210.
37 G. Schmölders, Finanzpsychologie [Financial psychology] *Finanz-Archiv*, N.S., vol. 13, no. 1 (1951); the same, Einführung in die Geld- und Finanzpsychologie, Darmstadt 1975.
38 'The economist looks hopefully into the eyes of the psychologist, but the latter is apt to return a stony and uncomprehending stare and to talk of other things, such as the inadequate psychological basis of modern economic theory. Thus the economist is thrown back, until more effective help is forthcoming from the psychologist, upon his own slender resources' (H. Dalton, *Principles of Public Finance*, 17th edn, London 1948, p. 107).
39 A. Mitscherlich, Ödipus und Kaspar Hauser, Tiefenpsychologische Probleme der Gegenwart, *Der Monat*, vol. 3 (October 1950).
40 P. Lersch, *Der Aufbau des Charakters* [Development of the Character], Munich 1942, pp. 247 et seq.
41 W. MacDougall, *Charakter und Lebensführung* [Character and Lifestyle], Berne 1946, pp. 74 et seq.
42 J.H. Schultz, *Die seelische Krankenbehandlung* [Psychological Treatment of the Sick], 4th edn, Jena 1930.
43 L. von Holzschuher, *Praktische Psychologie* [Practical Psychology], p. 279.
44 C.G. Jung has already expanded this all too narrow idea with a very much more general term of 'libido', which he defined as 'psychic energy', as the 'intensity of the psychological process' (*Wandlungen und Symbole der Libido* [The Psychology of the Unconscious], Leipzig 1912, p. 119).
45 Cf. B. Kuske, Die Begriffe Angst und Abenteuer in der deutschen Wirtschaft des Mittelalters [The concepts of fear and adventure in the German economy of the Middle Ages], *Ztschr. f. handelswissenschaftl. Forschung*, no. 11 (1949).
46 Cf. A. Rüstow's demand for a 'vital policy' instead of all too objective old-style 'social policy'.
47 'The designation "depth psychology" may now be applied as a generic term to every theory that does not stop on the threshold of awareness of the self, but searches for those strata that – with a certain independence of the self – develop their own psychological activity and reality; strata theory (Rothacker, Hoffmann et al.), the psychoanalytical school (Freud, Jung), the psychology of the individual (Adler, Künckel), characterology (Lersch, Klages) and finally bipolar psychology too' (L. von Holzschuher, *Praktische Psychologie* [Practical Psychology], p. 93).
48 Cf. A. Pinney, The institutional man, *Journal of Political Economy* (1940), p. 543.

49 W. Tinkel, Die Menschenaffen [The human apes], *Stimmen der Zeit*, vol. 147, citing Taeuber, Psychologie des Geldes [The psychology of money], *Jahrb. f. Psychologie und Psychotherapie*, no. 1 (1952).
50 G. Schmölders, Ökonomische Verhaltensforschung [Research on economic behaviour], in *ORDO-Jahrbuch für die Ordnung von Wirtschaft und Gesellschaft* [ORDO-Yearbook for Economic and Social Systems], Düsseldorf, Munich 1953, vol. V.
51 G. Schmölders, Ökonomische Verhaltensforschung [Research on economic behaviour], in *Aufgaben deutscher Forschung*, Bd. 1, *Geisteswissenschaften*, Cologne and Opladen 1956, pp. 406 et seq.
52 'Das Verhalten des Menschen in der wirtschaftlichen Wirklichkeit muß neu untersucht werden. Es ist konstant *und* wandelbar. Inwiefern?' [The behaviour of human beings in the real economic world must be investigated anew. It is both constant *and* subject to change. To what extent?] published by W. Eucken in *Grundlagen der Nationalökonomie* [Fundamentals of Economics] 6th edn. Berlin, Göttingen, Heidelberg 1950, p. XVI.
53 G. Scherhorn, *Methodologische Grundlagen der sozialökonomischen Verhaltensforschung* [Methodological Bases of Research on Socio-Economic Behaviour] Forschungsberichte des Landes Nordrhein-Westfalen, No. 942, Cologne and Opladen 1961.
54 J. Meyer, *Geldwertbewußtsein und Münzpolitik* [Consciousness of the Value of Money and Monetary Policy] Forschungsberichte des Landes Nordrhein-Westfalen No. 437, Cologne and Opladen 1956; H. Boehme, *Geldwertbewußtsein und Sparerverhalten* [Consciousness of the Value of Money and the Behaviour of Savers] Forschungsberichte des Landes Nordrhein-Westfalen No. 878, Cologne and Opladen 1960.
55 F. Läge, *Die säkulare Inflation* [The Secular Inflation] Frankfurt/M. 1959, English edn. Frankfurt/M. 1961; G. Schmölders, Währungsstabilität als menschliches Problem [Currency stability as a human problem], *Universitas*, no. 9 (Stuttgart 1959).
56 G. Schmölders, Finanzpsychologie [Psychology of finance], *Finanzarchiv*, vol. 13, Tübingen 1951; K. Holtgrewe, *Der Steuerwiderstand* [The Tax Resistance], Berlin 1953; G. Schmölders, Der Grundsatz der Budgetpublizität [The principle of the publicity of the budget], *Finanzarchiv*, vol. 18, Tübingen 1958.
57 G. Schmölders, *Das Irrationale in der öffentlichen Finanzwirtschaft* [The Irrational Element in Public Finance] Hamburg 1960; G. Schmölders, Fiscal psychology, *National Tax Journal*, vol. 12 (1959).
58 G. Schmölders, Unmerkliche Steuern [Imperceptible taxes], *Finanzarchiv*, vol. 20, (1959); G. Schmölders, Die Subventionsmentalität [The mentality of subsidizing] in *Aktionsgemeinschaft Soziale Marktwirtschaft, 18. Arbeitstagung*, 1962; *Steuern und Staatsausgaben in der öffentlichen Meinung der Bundesrepublik* [Taxes and Public Expenditure as Reflected in the Opinion of the Public of the Federal Republic], Forschungsberichte des Landes Nordrhein-Westfalen No. 877, Cologne and Opladen 1960.
59 G. Schmölders, *Die Politiker und die Währung* [The Politicians and the Currency] Frankfurt/M. 1957.
60 *Zeitschrift für das gesamte Kreditwesen* 1961, nos 15, 17, 21, 22.
61 Vols 1–4 Berlin 1959–61.
62 G. Schmölders, Zur Psychologie der Vermögensbildung in Arbeiterhand [A contribution to the psychology of property formation by wage earners],

Kyklos, vol. 15 (1962); G. Scherhorn, Hängt die Spartätigkeit vom Einkommen ab? [Does saving depend on income] in *Blätter für Genossenschaftswesen*, Wiesbaden 1961; G. Scherhorn, and B. Strümpel, Sparfähigkeit und Spartätigkeit der unteren Einkommensschichten [Capability to save and saving of the lower income brackets] in *Bundesarbeitsblatt*, Stuttgart and Cologne 1961; G. Scherhorn, Sparen und konkretes Eigentum [Saving and tangible property] in *Blätter für Genossenschaftswesen*, Wiesbaden 1960; H. Michel, *Eigentumspolitik, Voraussetzungen und Wirkungen aus psychologischer Sicht* [Policy of Property Formation, a Psychological View on its Prerequisites and Effects], Tübingen 1962.

63 B. Wissmann, *Die sogenannte 'Zinsernpflndlichkeit' der deutschen Sparer* [The So-called 'Sensitiveness to Interest Rates' of the German Savers], Berlin 1961.

64 G. Schmölders, Die Konjunkturpolitik der 'Moral Suasion' [The cyclical policy of 'Moral Suasion'] in *Wirtschaftsfragen der freien Welt, Festgabe für Ludwig Erhard* [Economic Problems of the Free World, Commemorative Publication for Prof. Ludwig Erhard], Frankfurt/M. 1960; G. Schmölders, *Wirtschaftspolitik mit dem Zeigefinger* [Economic Policy with a Raised Finger] Der Volkswirt, Frankfurt/M. 1960; H. Siegert, Währungspolitik durch 'Seelenmassage'? [Currency Policy through 'Mental Massage'?] Frankfurt/M. 1963.

65 G. Scherhorn, *Bedürfnis und Bedarf* [Need and Demand], Beiträge zur Verhaltensforschung [Contributions to the Research on Behaviour], Berlin 1959, vol. 1; Verhaltensforschung und Konsumtheorie [Research on Behaviour and Theory of Consumption] in *Schmollers Jahrbuch* [Schmoller's Year-Book], Berlin 1960.

66 G. Schmölders, Der Beitrag der anthropologischen Wissenschaften zur empirischen Sozialökonomik [The contribution of the anthropological sciences to empirical social conomics], Forschungsbericht für die Deutsche Forschungsgemeinschaft [Research report for the German Research Council], unpublished, Bad Godesberg 1960.

67 H. Lierz, Psyche und Eigentum [Psyche and property], med. Dissertation, Cologne 1957.

68 G. Schmölders, *Der wirtschaftende Mensch als soziales Wesen*, Merkur 1960; *Volkswirtschaftslehre und Psychologie* [Economics and Psychology], Berlin 1962.

69 G. Schmölders, Das Problem der Prognose im Wirtschaftsleben [The problem of prognosis], *Universitas*, no. 3 Stuttgart 1963; H. Kreikebaum and G. Rinsche, *Das Prestigemotiv in Konsum und Investition* [The Motive of Prestige in Consumption and Investment], Beiträge zur Verhaltensforschung [Contributions to Research on Behaviour] Berlin 1961, vol. 4; F. Rexhausen, *Der Unternehmer und die volkswirtschaftliche Entwicklung* [The Entrepreneur and Economic Development], Berlin 1960; G. Schmölders, Hypothese und Wirklichkeit des Käuferverhaltens [Hypothesis and reality of the behaviour of the buyer], *Schweizer Monatshefte*, no. 8 (1958).

3 The Private Household

1 A. Freiherr von Knigge, *Über den Umgang mit Menschen* [On Dealing with People], 3rd edn, Hanover 1790, quoted from the selection by Iring Fetscher, p. 95.

2 Cf. Table 3.2 below.
3 More on this below.
4 Regarding the qualitative division of the typical workload generated in a household, cf. Institute for Market and Consumer Research at the Free University Berlin, *Berliner Briefe*, vol. IV, no. 9. Regarding the quantitative significance of women's work in the home, see *inter alia* W. Feld, Der Geldwert der Hausfrauenarbeit [The monetary value of women's work in the home], Switzerland, *Zeitschrift für Volkswirtschaft und Statistik*, vol. 95 (1959), pp. 117–21; H. Fürst, *Einkommen, Nachfrage, Produktion und Konsum des privaten Haushalts in der Volkswirtschaft* [Income, Demand, Production and Consumption of the Private Household in the Economy], Stuttgart und Cologne 1956, pp. 83 et seq.
5 H. Sharp and P. Mott, Consumer decisions in the metropolitan family, *Journal of Marketing*, vol. 21 (1956/57), pp. 149 et seq.; H. Brown, The automobile buying decision with the family, in Nelson H. Foote (ed.), *Household Decision-Making*, New York 1961, pp. 194 et seq.
6 Brown, Automobile buying decision, p. 196.
7 J.N. Morgan, Household decision-making, in Foote (ed.), *Household Decision-Making*, p. 83 and the literature listed there.
8 E.N. Wolgast, Economic decision-making in the family, *Journal of Marketing*, vol. 23 (1958/59), pp. 151 et seq.
9 R. Ferber, *Factors Influencing Durable Goods Purchases*, Urbana, Ill., 1955, p. 94.
10 M.E. Olsen, *Distribution of Responsibility within the Family as Related to Social Stratification*, Grinnel College, 1956/57, p. 37.
11 *Intermarket: Das Verhalten des Verbrauchers* [Consumer Behaviour], Düsseldorf 1958, Set of Tables A, Table 330/333.
12 On the different notion of thrift in men and women, cf. Schmölders, *Psychologie des Geldes* [Psychology of Money], Reinbek bei Hamburg 1966, pp. 71 et seq.
13 An assessment by interviewees of the thrift demonstrated by their partner, recorded using a series of prompt pictures, similarly found a large degree of parallel responses between husband and wife.
14 On the psychological conflicts of 'injurious' spending of money in young marriages, cf. Schmölders, *Psychologie des Geldes* [Psychology of Money], pp. 107 et seq.
15 G. Engelhardt, Die Bedeutung des Einkommens als ein Kennzeichen der sozialen und der wirtschaftlichen Situation des privaten Haushalts [The importance of income as an indicator of the social and economic situation of the private household], unpublished degree thesis (Seminar f. Finanzwissenschaft), Cologne 1962, pp. 40 et seq.
16 Ibid., pp. 73 et seq.
17 Ibid., pp. 52 et seq.
18 G. Katona, *Das Verhalten der Verbraucher und Unternehmer* [Psychological Analysis of Economic Behavior], Tübingen 1960, table on p. 186.
19 A. Marshall, *Principles of Economics* [Book IV, Chapter VII, the editors].
20 Knigge, *Über den Umgang mit Menschen* [On Dealing with People].
21 We recorded agreement with the following statements:

		% agreement from all male heads of household	*% agreement from all housewives*
1.	Thrift is an important characteristic which is an essential part of a good character	82	83
2.	It's better to wait two hours for the next bus than to take a taxi	66	69
3.	It's better to miss seeing a film than to buy a seat in an expensive box	60	65
4.	You should think thrice before spending anything, save as much as possible, and feel relaxed about denying yourself some things in life	14	14

22 Cf. on this Schmölders, *Psychologie des Geldes* [Psychology of Money], Reinbek bei Hamburg, pp. 37 et seq.
23 Cf. Günter Schmölders, *Der Umgang mit Geld im privaten Haushalt*, Berlin 1969, pp. 121 et seq.
24 E. Egner, *Der Haushalt. Eine Darstellung seiner volkswirtschaftlichen Gestalt* [The Household. A Representation of its Economic Face], Berlin 1952, p. 177.
25 G. Katona, *Der Massenkonsum* [Mass Consumption], Düsseldorf 1965, *passim*.
26 E. Cumming and W.E. Henry, *Growing Old. The Process of Disengagement*. Basic Books, New York 1961.
27 Cf. on these questions D. Fricke, *Einkommen und Anspruchsniveau* [Income and Level of Needs]; also Katona, *Der Massenkonsum* [Mass Consumption].
28 For a detailed treatment of historical developments in money use and monetary theory see G. Schmölders, *Geldpolitik,* 2nd edn. Tübingen and Zürich 1968, Chs I and II.
29 G.F. Knapp, *Staatliche Theorie des Geldes*, 3rd edn, Munich and Leipzig 1921.
30 R.L. Teigen, An aggregate quarterly model of the U.S. monetary sector 1953–1964, a paper presented to the *Conference on Targets and Indicators of Monetary Policy*, University of California, 2 April 1966, p. 6.
31 A. Müller, *Versuche einer neuen Theorie des Geldes*, Leipzig and Altenburg 1816; also see W. Andreae, *Geld und Geldschöpfung,* Frankfurt-Main 1952, p. 273.
32 T. Parsons, *The Social System*, New York 1964, p. 12; also T. Parsons, *Essays in Sociological Theory*, New York 1965, *passim*; W.F. Whyte, *Money and Motivation*, New York 1955, Ch. 1.
33 H. Rittershausen, *Bankpolitik,* Frankfurt-Main 1956, p. 104.
34 G. Schmölders, *Gutes und schlechtes Geld* [Good Money and Bad Money], Frankfurt-Main 1968, p. 11.
35 B.F. Skinner, *Science and Human Behavior*, New York 1965, p. 12.
36 Ibid., p. 6.

37 See G. Schmölders, *Die Zigarettenwährung* [The Cigarette Currency], Kölner Universitätszeitung 1947.
38 See Schmölders, *Geldpolitik*, p. 45.
39 T. Newcomb, R. Turner and Ph. Converse, *Social Psychology*, New York and London 1965, Chs 3 and 5.
40 K. Boulding, *The Image*, Ann Arbor 1961; *The Meaning of the 20th Century*, New York 1967; K. Deutsch, *The Nerves of Government*, New York 1967; P.G. Herbst, A theory of simple behavior systems, I and II, *Human Relations*, vol. 14 (1961); Newcomb et al., *Social Psychology*; T. Parsons and E. Shils (eds), *Toward a General Theory of Action*, New York 1962.
41 E. Mueller, Effects of consumer attitudes on purchases, *American Economic Review*, vol. 47 (1957); Consumer attitudes: their influence and forecasting value, in National Bureau of Economic Research (ed.), *The Quality and Economic Significance of Anticipations Data*, Princeton 1960; Ten years of consumer attitude surveys: their forecasting record, *Journal of the American Statistical Association*, vol. 58 (1963).
42 As for the concepts 'habitual behaviour' and 'problem-solving behaviour', see G. Katona, *Psychological Analysis of Economic Behavior*, New York 1951, Part I.
43 G. Katona et al., *Survey of Consumer Finances*, Ann Arbor, available for 1960–67.
44 Katona, op. cit., and Mueller, op. cit.
45 Schmölders, *Psychologie des Geldes*, pp. 37–42.
46 Ibid., pp. 47–9.
47 Ibid., pp. 41–53.
48 Ibid., pp. 54–6.
49 J.M. Keynes, *The General Theory of Employment, Interest and Money*, London 1936, Chs 13 and 15.
50 V.F. Wagner, *Geschichte der Kredittheorien*, Vienna 1937, p. 460.
51 E. Schneider, *Einführung in die Wirtschaftstheorie*, Part III, Tübingen 1967, pp. 47–67. (ΔK_r = the limit of any additional credit expansion by credit institutions based on their surplus reserves (ΔZ). ΔZ = the surplus reserves in the credit institutions comprising cash and accounts with the central bank. r = the rate of minimum reserves the credit institutions are held to maintain is fixed by the central bank. c = the amount of central bank money that is transferred to and retained in the non-banking sector at each stage of the credit expansion process.)
52 The German postal system offers a low-interest savings account as well as low-fee cheque service.
53 Newcomb et al., *Social Psychology*, Ch. 3.
54 Schmölders, *Psychologie des Geldes*, pp. 64–8.
55 *Report of the Committee on the Working of the Monetary System*, London 1959, p. 132.
56 Ibid., p. 130.
57 Schmölders, *Psychologie des Geldes*, pp. 70–1.
58 Ibid., pp. 70–6.
59 For a short description of tree analysis, see p. 242 [p. 111 of this book, eds].
60 The data deck contained multiple-punched columns, the conversion of which into machine-readable form proved too thorny a problem to be achieved in time. The data used stem from the 1965 *Survey of Consumer Finances*, Project 741. The particular tree program used is an adaptation

of ISR'S Automatic Interaction Detector. For a description see B. Biervert, M. Dierkes and A. Walzel, *Automatischer Split zur optimalen Kombination erklärender Faktoren*, Cologne 1968.

61 Schmölders, *Psychologie des Geldes*, p. 113; also Boulding, *The Meaning*, pp. 58–60, especially p. 59: 'Similarly the wise social scientist will not neglect the rich insights which are derived from the poets, and will use them in the formulation of theoretical models.'

62 G. Katona et al., 1965 SCF, Ann Arbor 1966, pp. 29–32.

63 Ibid., p. 31; see also Table 2-10, p. 44.

64 G. Schmölders, Umgang mit Geld als Forschungsaufgabe, in H.E. Büschgen (ed.), *Geld, Kapital und Kredit,* Stuttgart 1968, pp. 36–7.

65 F.T. Juster, *Anticipations and Purchases: an Analysis of Consumer Behavior*, Princeton 1964, p. 3.

66 G. Simmel, *Philosophie des Geldes* [The Philosophy of Money], Munich 1930, pp. 164 et seq.

67 I. Fisher, *The Money Illusion*, New York 1928.

68 Katona et al., op. cit., p. 248.

69 Das Ausmaß der Geldentwertung seit 1950 und die weitere Entwicklung des Geldwertes, *Monatsberichte der Deutschen Bundesbank*, March 1968, p. 13.

70 See Schmölders, *Geldpolitik*, p. 71.

71 I. Fisher, *Feste Währungen* [Stabilised Money], Heidelberg 1948, p. 24.

72 See Juster, *Anticipations*, p. 3.

73 J. Sonquist and J.N. Morgan, *The Detection of Interaction Effects*, Ann Arbor 1964.

74 *General Purpose Systems Simulator III*, White Plains, New York 1965.

75 The question was: 'Can you tell me from this list, which durables your household owns?' (For list of durables, see Appendix.)

76 For this purpose the question was: 'In your opinion, which durables do you still need to be able to say: "Now I have an appropriate standard of living"?'

77 Describing the changes in the standard of consumption during the life cycle, the variables concerning age and size of the households are dealt with separately in order to be able to prove a possible specific influence of one of these factors on the levels of consumption and aspiration.

78 This sentiment of saturation usually exists only temporarily: 'But the feeling of saturation may be temporary, at least in the absence of repeated severe shock' (E. Katona, Consumer behavior: theory and findings on expectations and aspirations, *American Economic Review*, vol. 58, no. 2 (May 1968), pp. 19–30 [p. 21]).

4 The Entrepreneur

1 G. Hederer, *Die Motivation von Investitionsentscheidungen der Unternehmung. Eine verhaltenswissenschaftliche Studie*, 1971.

2 Ibid., p. 102. Even Erich Schneider, prominent supporter of rational theory, acknowledged in his early works of 1944: 'In most cases it is these imponderables which are decisive for the choice between two or more investment options' (E. Schneider, *Investering og Rente*, Copenhagen 1944).

3 M. Kreikebaum and G. Rinsche, Das Prestigemotiv in Konsum und Investition; demonstrative Investition und aufwendiger Verbrauch, *Beiträge zur Verhaltensforschung*, no. 4 (1961).
4 D. Riesman, *Die einsame Masse* [The Lonely Crowd], 1956, p. 146.
5 E. Schmalenbach, *Der freien Wirtschaft zum Gedächtnis* [In Memoriam Free Memory], 3rd edn, 1958, p. 88.
6 Meinolf Dierkes, *Der Beitrag des französischen Mittelstandes zum wirtschaftlichen Wachstum*, 1969.
7 Cf. F. Rexhausen, *Der Unternehmer und die wirtschaftliche Entwicklung*, Berlin 1960.
8 W. Stark, *Die Wissenssoziologie*, 1960, p. 221.
9 C.f. G. Bombach, Probleme der Bildungsökonomik, presentation to the Wissenschaft und Wirtschaft discussion group on 2.12.1963; further references here.
10 The only country whose production statistics allow accurate allocation of annual national product growth to the contribution of the so-called 'economic factors' – labour and capital investment on the one hand and the 'imponderables' – industriousness, intelligence, technical knowledge and organization skill on the other, over a period of more than 50 years, is Norway. It has emerged here that on average the national product for the years from 1900 to 1955 rose by 0.2 per cent per 1 per cent as a result of increased capital investment expenditure and by 0.75 per cent for each 1 per cent of increased expenditure on labour, but that on the other hand the 'human' forces in economic progress mentioned rose by 1.8 per cent per 1 per cent as a result of improved performance. Cf. Odd Aukrust in the February issue of the *Productivity Measurement Review* published by the OEEC, 1959.
11 W. Eucken, *Grundlagen der Nationalökonomie*, 6th edn, Berlin 1950, p. xvi.
12 Cf. H. Wiesbrock, Über Ethnocharakterologie, Wesen – Forschungsprogramm – Methodik, *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, vol. 9, no. 4, (1957), p. 552.
13 D.C. McClelland, *The Achieving Society*, Princeton 1961.
14 M. Weber, Die protestantische Ethik und der Geist des Kapitalismus, in *Gesammelte Aufsätze zur Religionssoziologie*, Tübingen 1928.
15 Cf. E.E. Hagen, *On the Theory of Social Change*, Homewood, Ill., 1962, pp. 28 et seq.

5 Psychology of Taxation and Public Finance

1 A. Labriola, *Sul Principio regulatore della finanza pubblica*, Naples 1902, speaks of the 'arbitrariness and inconsistency' in the ruling power of political authorities.
2 A. Puviani, *Teoria della illusione finanziaria*, Milan 1903.
3 J. Swift, An answer to a paper called 'A Memorial of the Poor Inhabitants, Tradesmen, and Labourers of the Kingdom of Ireland', 1728.
4 G. Jêze, *Le Budget*, Paris 1910.
5 A. Pigou, *A Study in Public Finance*, London 1928.
6 H.M. Groves, Empirical studies of income tax compliance, *National Tax Journal*, December 1958, pp. 291–301.

7 G.F. Break, Income tax and incentives to work: an empirical study, *American Economic Review*, vol. XLVII, no. 5 (September 1957).
8 G. Schmölders, *Das Irrationale in der öffentlichen Finanzwirtschaft* [The Irrational Element in Public Finance], Reinbek bei Hamburg 1960.
9 As 90 per cent of the German population belong to either Protestant or Roman Catholic denominations, both churches are largely financed by a percentage addition (10–11 per cent) to the general income tax of the state called church tax.
10 G. Schmölders, *Die Politiker und die Währung* [The Politicians and the Currency], Frankfurt M. 1957.
11 H. Lanfenburger, *Traité d'Économie et de Législation Financière*, Paris, 1954. See also H. Lanfenburger, *Théorie économique et psychologique des Finances Publiques*, Paris 1956.
12 P.L. Reynaud, Récessions et seuils économiques, *Revue Économique*, November 1957.
13 E.g. W.J. Behr, *Staatswirtschaftslehre*, Leipzig 1822.
14 J. Swift, 'An Answer to a Paper Called a Memorial of the Poor Inhabitants, Tradesmen, and Labourers of the Kingdom of Ireland' (1728), in *Jonathan Swift: Irish Tracts*, Herbert Davis (ed.), Oxford, pp. 17–25.
15 W. Gerloff, Steuerwirtschaftslehre [The economics of taxation], in *Handbuch der Finanzwissenschaft*, 2nd edn, vol. 2, Tübingen 1952, p. 325.
16 E. Grossmann, Die Finanzgesinnung des Schweizer Volkes [The financial ethos of the Swiss], *Zeitschrift für schweizerische Statistik und Volkswirtschaft*, 1930.
17 E. Grossmann, *Gedanken über Finanzpolitik in der reinen Demokratie* [Reflections on Tax Policy in a Pure Democracy], Berne 1948, p. 18.
18 B. Strümpel, Sind die Schweizer steuerwilliger? [Are the Swiss more prepared to pay tax?] in *Blick durch die Wirtschaft* dated 25.3.1964. Also published as Der Schweizer als Steuerzahler [The Swiss as taxpayers], *Finanzarchiv*, NS, vol. 24 (1965), pp. 244 et seq.
19 Cf. G. Schmölders, *Finanz- und Steuerpsychologie* [Psychology of Public Finance and Taxes], Reinbek 1970, pp. 53 et seq.
20 G. Schmölders, Unmerkliche Steuern [Imperceptible taxes], *Finanzarchiv*, vol. 20 (1959), pp. 23–34.
21 E. Schueller, *Réfutations au rapport de la commission de réforme fiscale sur la taxation de l'énergie* [Responses to the Report from the Commission for Tax Reform on the Taxation of Energy], Paris 1952. P.L. Reynaud, La Pression Fiscale Psychologique et le Dynamisme des Producteurs, *Finanzarchiv*, vol. 19 (1958/59), pp. 382 et seq.
22 Schmölders, Unmerkliche Steuern.
23 W. Vocke, *Die Abgaben, Auflagen und die Steuer vom Standpunkt der Geschichte und der Sittlichkeit* [Contributions, Levies and Tax, from the Viewpoint of History and of What is Socially Acceptable], Stuttgart 1887, p. x.
24 I. Jastrow, *Gut und Blut fürs Vaterland* [Property and Blood for the Fatherland], Berlin 1917.
25 J. Popitz, Der wirtschaftende Mensch als Steuerzahler, *Vierteljahrheft für Finanz- und Steuerrecht*, vol. IV, Berlin 1930; O. Veit, Grundlagen der Steuermoral [Principles of tax morale], *Zeitschrift für die gesamte Staatswissenschaft*, vol 83, pp. 317 et seq.; G. Schmölders, *Steuermoral und Steuerbelastung* [Tax Morale and Tax Burden], Berlin 1932.

26 Cf. on this point B. Beichelt, B. Biervert, J. Daviter, G. Schmölders and B. Strümpel, *Steuernorm und Steuerwirklichkeit*, vol. II, *Steuermentalität und Steuermoral in Grossbritannien, Frankreich, Italien und Spanien*, Cologne and Opladen 1969; also country-specific information in S.M.G. de Ortega, Die spanische Steuermentalität, unpublished diploma thesis, Cologne 1963; H. Roeper, Die Steuermoral – bei uns und den anderen, *Frankfurter Allgemeine Zeitung (FAZ)*, 17.08.63; F.H. Rosenstiel, Die Steuermoral in Amerika, *FAZ*, 20.08.63; L. Singer, Die Steuermoral in Brasilien, *FAZ*, 26.08.63; W.L. Hudson, Wie steuerehrlich sind die Engländer?, *FAZ*, 03.09.63; G.L. Leszcynski, Die Steuermoral in Indien, *FAZ*, 10.09.63; M. Wiebel, Die Steuermoral in Italien, *FAZ*, 28.09.63; H. Konitzer, Mit der Steuermoral in Österreich zufrieden, *FAZ*, 07.10.63; W. van den Wyenbergh, Die Steuermoral in der Schweiz, *FAZ*, 02.11.63; P. Bengt, Die Steuermoral in Schweden, *FAZ*, 15.10.63; K. Jetter, Die Steuermoral in Frankreich, *FAZ*, 12.11.63; L. Bauer, Die Steuermoral in Spanien, *FAZ*, 19.11.63; O. Brachfeld, Die Steuermoral in hispanischen Ländern, *FAZ*, 07.12.63; G. Schmölders, Die Steuermoral der Deutschen, *FAZ*, 11.12.63; G. Schmölders, Wie steuerehrlich sind die Deutschen?, *FAZ*, 25.01.1964; J. Rivoli, *Vive l'impôt*, Bourges 1965; G. Schmölders and B. Strümpel, Vergleichende Finanzpsychologie – Besteuerung und Steuermentalität in einigen europäischen Ländern [Comparative psychology of public finance – taxation and tax mentality in some European countries], Akademie der Wissenschaften und der Literatur, *Abhandlungen der Geistes- und Sozialwissenschaftlichen Klasse*, no. 4, 1968; A.G. Davies, P. Vink, and E. Krings, *De Verhouding tussen Inspecteur en Contribuable*, Alpfen am Rhein 1965; G. Schmölders, Steuermentalität [Tax mentality], *Institut für Finanzwissenschaft und Steuerrecht*, no. 50, Vienna 1967.

27 'En Angleterre, le terme "honorable obligation de payer l'impôt" n'est pas un slogan' ['In England, the phrase "honourable obligation to pay duty" is not an empty expression'], H. Laufenburger, Aspects psychologiques des finances publiques, in *Beiträge zur Geld- und Finanztheorie*, Tübingen 1951, p. 53.

28 Quoted in Hudson, Wie steuerehrlich sind die Engländer?

29 Konitzer, Mit der Steuermoral in Österreich zufrieden.

30 Cf. on this Schmölders, *Finanz- und Steuerpsychologie*, pp. 53 et seq., and B. Strümpel, *Steuersystem und wirtschaftliche Entwicklung* [The Tax System and Economic Development], Tübingen 1968; B. Strümpel, *Steuermoral und Steuerwiderstand der deutschen Selbständigen* [Tax Morale and Tax Resistance by German Independent Professionals], Forschungsberichte des Landes Nordrhein-Westfalen No.1682, Cologne and Opladen 1966.

31 G. Schmölders, *Organische Steuerreform* [Organic Tax Reform], Berlin 1953, p. 21.

32 Reg.-Dir. Dr Terstegen, Besonderheiten der Steuerstraftaten und des Steuerstrafrechts, insbesondere unter dem Gesichtspunkt einer Zusammenarbeit zwischen Finanzverwaltung und Kriminalpolizei, in *Bekämpfung der Wirtschaftsdelikte (einschließlich der Korruption)*, Arbeitstagung im Bundeskriminalamt, Wiesbaden 1957, p. 222.

33 C.-F. Graumann and W. Fröhlich, Ansätze zu einer psychologischen Analyse des sogenannten Steuerwiderstands [Approaches to a psychological analysis of the phenomenon of tax resistance], *Finanzarchiv*, NS, vol. 17 (1956/57), pp. 418 et seq.

34 'The oldest howl over taxation known in Germany is the uproar instigated by the Saxons when Charlemagne imposed the tithe on them as a general tax on land, and at that time they had some right to protest about this because up until then they had paid no taxes at all, and the Emperor thus suddenly converted them into tithed persons, who lost ownership of a large part of their inheritance' (quoted in translation from the entry for 'Steuerjammer' in the *Allgemeine deutsche Realencyklopädie für die gebildeten Stände*, Leipzig: Brockhaus 1820, p. 523).

35 Cf. G. Schmölders, *Allgemeine Steuerlehre* [General Theory of Taxation], 3rd edn, Berlin 1958, pp. 117 et seq.; Schmölders, *Finanz- und Steuerpsychologie*, pp. 95 et seq.

36 F.K. Mann, Die Finanzkomponente der Revolution, in *Finanztheorie und Finanzsoziologie*, Göttingen 1959, pp. 143 et seq.

37 Terstegen, Besonderheiten der Steuerstraftaten und des Steuerstrafrechts . . . , pp. 217 et seq.

38 W. Peres, Die Steuerhinterziehung im Spiegel der Rechtsprechung, Die Entscheidungspraxis des Amts- und Landgerichts Köln 1950–1959, *Finanzwissenschaftliche Forschungsarbeiten*, NS, vol. 27, Berlin 1963.

39 G. Schmölders, Das Gerechtigkeitspostulat in der Besteuerung [The postulate of fairness in taxation], *Finanzarchiv*, NS, vol. 23 (1964), pp. 53 et seq. (Commemorative Papers for F.K. Mann).

40 F.K. Mann, *Die Gerechtigkeit in der Besteuerung, Beiträge zur Finanzwissenschaft* (Commemorative Papers for Georg von Schanz), vol. II, Tübingen 1928, p. 116.

41 Thus, for example, recently F.A. v. Hayek, *Wirtschaft, Wissenschaft und Politik* [Economics, Academia and Politics], Freiburger Universitätsreden, Freiburg 1963, p. 11.

42 E. Gutenberg, Zur Frage des Normativen in den Sozialwissenschaften [On the question of the normative in the social sciences], in *Sozialwissenschaft und Gesellschaftsgestaltung, Festschrift für G. Weisser*, Berlin 1963, p. 123.

43 Th. Keller, Mehr Steuergerechtigkeit [More tax justice], in *Zukunftsausgaben in Wirtschaft, Gesellschaft*, Zürich and St. Gallen 1963, pp. 213 et seq.

44 Mann, *Die Gerechtigkeit in der Besteuerung*.

45 According to Benjamin Lee Whorf 'crypto-type' is 'a subtle meaning which is hard to comprehend. Lying below the surface of words, which does not correspond to any actual word and which nevertheless can be shown by linguistic analysis to be a functionally important element in grammar' (*Sprache, Denken, Wirklichkeit*, Hamburg 1963, p. 116).

46 F.K. Mann, *Steuerpolitische Ideale*, Jena 1937.

47 H.F. Weston, *Principles of Justice in Taxation*, New York 1903; R. Jones, *The Nature and First Principles of Taxation*, London 1914; F.K. Mann, Grundsätze der Besteuerung [Principles of taxation], in *Schmollers Jahrbuch*, vol. 50, 1926; F. Neumark, *Grundsätze der Besteuerung in Vergangenheit und Gegenwart* [Principles of Taxation in the Past and Present], Wiesbaden 1965.

48 'Negatively, the principle of universality is identical with the prohibition of tax discrimination undertaken on grounds other than the ability to pay, whereas as a positive term it says that all people who are able to pay taxes and to whom one of the statutorily-determined reasons for a tax obligation apply are called upon to pay tax, without regard to non-economic

characteristics such as (legal) nationality, standing, class, religion etc.' (Neumark, *Grundsätze*, p. 44).

49 'Equality' means 'that persons in the same or similar circumstances of relevance for tax purposes are to be treated equally with regard to each individual tax under a particular regional administrative body' (Neumark, *Grundsätze* p. 45).

50 'The . . . principle of proportionality is, in terms of content, identical with the principle of taxation based on the individual's ability to pay' (Neumark, *Grundsätze* p. 45); in other words, 'the taxes to be paid by the individual should be of such an order that each person is restricted in his satisfaction of needs to the same degree' (Haller, *Die Steuern*, p. 39). The definitive determining variable for the scope of ability to satisfy needs is the benefit from one's individual income, here comprising not only monetary income but also values in terms of leisure and assets etc. (cf. Haller, *Die Steuern*, pp. 42 et seq.).

This call for the same sacrifice from all those being assessed for tax can in turn be interpreted in three ways:

(1) Equal absolute sacrifice $N(E) - N(E - St)$

(2) Equal proportional sacrifice $\dfrac{N(E) - N(E - St)}{N(E)}$

(3) Equal marginal sacrifice $\dfrac{dN(E - St)}{d(E - St)}$

Where E = income; St = amount of tax; N (E) = overall benefit (or satisfaction of needs) derived from income E. (See on this R.A. Musgrave, *Finanztheorie*, Tübingen 1966, pp. 78 et seq.). For some time, people have generally called for the second of these concepts. The ostensible intention behind this, of only concluding the necessity for a progression in the tax rate from the fact of a diminishing limit on benefit from income, in order to arrive at an equal relative sacrifice for those assessed, is however not achieved; A.J. Cohen-Stuart (*Bijdrage tot de theorie de progressive inkamstenbelasting* [Contributions to the Theory of Progressive Income Tax], The Hague) demonstrated as early as 1889 that with certain falling curves for limit of benefit, only a proportional or even a regressive tariff guarantees an equal relative sacrifice. (Cf. Haller, *Die Steuern*, pp. 78 et seq.; H. Haller, Bemerkungen zur progressiven Besteuerung und zur steuerlichen Leistungsfähigkeit [Observations on progressive taxation and on the ability to pay], *Finanzarchiv*, NS, vol. 20 (1959/60), pp. 35 et seq.).

51 See K. Tippelmann, *Die Problematik der Vermögensteuer* [The Problem of Net Worth Tax], Berlin 1963.

52 Schmölders, *Allgemeine Steuerlehre*, pp. 25 et seq.

53 G. Schmölders, Die Politik und die Währung, *Schriftenreihe zur Geld- und Finanzpolitik* vol. VI, Frankfurt (Main) 1959, p. 42.

54 Thomas Aquinas, in *Ausgewählte Schriften zur Staats- und Wirtschaftslehre des Thomas von Aquin* (*Die Herdflamme*, vol. 3), Jena 1932, p. 212.

55 One recalls the observation by Abraham Lincoln 'Public consent is everything; without public consent nothing can succeed, with public consent nothing can fail.'

56 Schmölders, *Finanz- und Steuerpsychologie*, pp. 53 et seq.

57 G. Schmölders, Wie steuerehrlich sind die Deutschen?, *Frankfurter Allgemeine Zeitung*, 25.01.1964.

58 See section 5.2.

59 H. Haller, *Finanzpolitik*, 4th edn., Tübingen and Zürich 1968, p. 218.

60 G. Schmölders, *Unmerkliche Steuern*, pp. 30 et seq.

61 Neumark (*Grundsätze der Besteuerung* . . . , p. 39) argues on the grounds of 'real democracy' for taxation to be transparent, since he shares W.E. Channing's view that 'a free people ought to know what they pay for freedom'.

62 See B. Strümpel, *Steuersystem und wirtschaftliche Entwicklung* [Tax System and Economic Development], Tübingen 1968, and B. Beichelt, B. Bievert, J. Daviter, G. Schmölders and B. Strümpel, *Steuernorm und Steuerwirklichkeit*, vol. II, Cologne and Opladen 1969.

63 B. Strümpel, The contribution of survey research to public finance, in Alan T. Peacock (ed.), *Quantitative Methods in Public Finance*, New York 1969.

64 Still more conspicuous is the attempt of the German Federal Republic to induce large fractions of blue-collar workers to saving and capital formation by offering subsidies or tax allowances for special savings deposits. Who are the people who have been induced to switch from a proletarian 'living from day to day' to the habit of acquiring monetary reserves? Studies of our Cologne Institute show that not the lower strata, i.e. the unskilled workers were attracted by the premiums offered, but an upper group of blue-collar and a lower group of white-collar workers with incomes beyond the poverty level. All such tax premiums as an instrument for influencing economic behaviour go at the expense of distributional equity; not the poorest or the most needy profit most from these measures but a group of people advanced enough to be amenable to monetary incentives. A strategy leading to these dubious distributional consequences does not reflect an abandonment of the original policy goal of fighting poverty for humanitarian reasons. Rather, it reflects a widening of the scope of welfare policy to new and, if you wish, less needy people as well as a widening of the strategy from pure income increases to more radical measures, such as education, training, mental rehabilitation and even asset formation.

65 For an instructive collection of evidence for this contribution, compare National Bureau of Economic Research, *Foreign Tax Policies and Economic Growth*, New York 1966.

66 F. Neumark, *Grundsätze der Besteuerung in Vergangenheit und Gegenwart*, Wiesbaden 1965, pp. 27 f.

67 See K.M. Kauffman, Income tax and economic development, *National Tax Journal*, vol. 13 (1960), pp. 141–62 and 252–69.

68 B. Strümpel, Sozioökonomischer Wandel und die Durchsetzbarkeit der Besteuerung, *Finanzarchiv*, NS, vol. 25 (1966).

69 The empirical data on which the subsequent paragraphs are based have been collected by the Cologne Centre in Empirical Economics (Forschungsstelle für empirische Sozialökonomik – Prof. G. Schmölders, University of Cologne) – with financial support of the Volkswagenwerk Foundation. The sample covered a representative cross-section of the male urban population (1923 respondents). The services of DATA S.A., Estudios de Mercados Opinion, Madrid, in conducting the survey are gratefully acknowledged.

70 'lmpuesto sobre los rendemientos del trabajo personal' and 'impuesto sobre actividades y beneficios comerciales y industriales'.
71 'Impuesto sobre el trafico de las empresas'.
72 A.C. Pigou, *A Study in Public Finance*, 3rd edn, London 1952, p. 55.
73 For example Walter Wittmann, Zur Frage der wachstumspolitischen Effizienz eines rationalen Steuersystems. *Finanzarchiv* NS, vol. 24 (1985), pp. 51–69, and literature quoted there.
74 G.F. Break, Income tax and incentives to work, an empirical study, *American Economic Review*, Sept. 1957; Costanza Costantino, La tassazione del reddito e gli incentivi al lavoro, *Archivio Finanziario*; James N. Morgan, Robin Barlow and Harvey N. Brazer, A survey of investment, management and working behavior among high-income individuals, a paper presented at the Meeting of the American Economic Association, Chicago, December 1984; B. Strümpel, *Steuermoral und Steuerwiderstand der deutschen Selbständigen – ein Beitrag zur Lehre von den Steuerwirkungen*, Cologne and Opladen 1966.
75 Benjamin Higgins, Postwar tax policy, in Carl Shoup and Richard Musgrave (eds), *Readings in Public Finance*, New York 1959.
76 G. Schmölders, Der Beitrag der Verhaltensforschung zur Theorie der wirtschaftlichen Entwicklung, in Norbert Kloten et al. (eds), *Systeme und Methoden in den Wirtschafts- und Sozialwissenschaften*, Tübingen 1964.
77 Walt W. Rostow, *The Stages of Economic Growth*, Cambridge University Press, 1960, p. 52.
78 Walther G. Hoffmann, *Stadien und Typen der Industrialisierung*, Jena 1931, p. 104; and Rostow, *Stages of Economic Growth*.
79 Albert O. Hirschman, *The Strategy of Economic Development*, New Haven 1958, pp. 100 et seq.
80 Everett M. Rogers, *Diffusion of Innovations*, New York, London 1962.
81 W.G. Hoffmann, Industrialisierung, in *Handwörterbuch der Sozialwissenschaften*.
82 Wolfgang F. Stolper, Zölle [Customs duties], in *Handwörterbuch der Sozialwissenschaften*.
83 Schmölders, Der Beitrag der Verhaltensforschung.
84 See note 10.
85 Günter Schmölders, Die Überwindung von Widerständen der Wirtschaftssubjekte, in H. Seraphim (ed.), *Probleme der Willensbildung und der wirtschaftspolitischen Führung*, Berlin 1959.
86 Compare e.g. Gottfried Bombach, Wirtschaftswachstum [Economic growth], in *Handwörterbuch der Sozialwissenschaften*, vol. 12, pp. 795f.
87 A.K. Cairncross, The place of capital in economic progress, in H. Dupriez (ed.), *Economic Progress*, Lovain 1955.
88 Alan Williams, Tax policy – can surveys help? *Political and Economic Planning* London, vol. 32, No. (494) (March 1966).

6 Psychology and Macroeconomics

1 The German term *Buchgeld* or *Giralgeld* has not found, so far, an adequate translation in English; payment by cheque is only part of this wider concept, including all forms of cashless transfers of money by banks, postal money order or otherwise.

2 Jean Bodin, *La réponse de Jean Bodin au M. de Malestroit* (Paris 1568), nouvelle édition, Paris 1932.
3 Bernardo Davanzati, Lezione delle monete, in *Sammlung Custodi*, Milan 1804.
4 John Locke, *Some Considerations of the Consequence of Lowering the Rate of Interest and Raising the Value of the Money*, 1691.
5 Richard Cantillon, *Essai sur la nature du commerce en général*, London 1755; German edition, Jena 1931.
6 Knut Wicksell, *Geldzins und Güterpreise* [Interest and Prices], Jena 1898.
7 Albert Aftalion, Die Einkommenstheorie des Geldes und ihre Bestätigung durch die gegenwärtigen Phänomene, in *Die Wirtschaftstheorie der Gegenwart*, Vienna 1932.
8 Ludwig V. Mises, *Theorie des Geldes und der Umlaufmittel* [The Theory of Money and Credit], Munich 1912.
9 Otto V. Zwiedineck-Südenhorst, Die Einkommensgestaltung als Geldwertbestimmungsgrund, *Schmollers Jahrbuch*, 1909, p. 160.
10 Alvin H. Hansen, *Monetary Theory and Fiscal Policy*, New York 1949.
11 Irving Fisher, *The Money Illusion*, New York 1928.
12 Irving Fisher, Our unstable dollar and the so-called business cycle, *Journal of the American Statistical Association*, vol. XX (1925), pp. 179 et seq.
13 Otto Veit, *Volkswirtschaftliche Theorie der Liquidität* [Economic Theory of Liquidity], Frankfurt 1948.
14 E.V. Morgan, The ownership of capital and monetary policy, *The Three Banks*, no. 42 (1959).
15 *Report of the Committee on the Working of the Monetary System*, London 1959, p. 133.
16 Italics mine.
17 Andreas Paulsen, *Liquidität und Risiko in der wirtschaftlichen Entwicklung*, Frankfurt and Berlin 1953.
18 P.L. Reynaud, Recessions et seuils économiques, *Revue économique*, no. 6 (1957), pp. 1032 et seq.
19 Wesley C. Mitchell, *Business Cycles*, Berkeley 1913; German edition (by Altschul), Bonn and Leipzig 1931.
20 Randolph Burgess, *The Reserve Banks and the Money Market*, New York 1927; German edition (by H. Schacht), Berlin n.d.
21 G. Schmölders, *Geld und Kredit: Probleme der Wirtschaftspolitik*, Leipzig 1938, p. 109.
22 G. Schmölders, Die Konjunkturpolitik der 'moral suasion', in *Wirtschaftsfragen der freien Welt, Festschrift zum 60. Geburtstag von Ludwig Erhard*, Frankfurt 1957, pp. 282 et seq.
23 Ibid., p. 135.
24 Eva Mueller, Effect of consumer attitudes on purchases, *American Economic Review*, vol. 37 (1947); G. Katona, Analysis of dissaving, *American Economic Review*, vol. 39 (1949).
25 G. Schmölders, Ökonomische Verhaltensforschung [Behavioural economics], *Ordo-Jahrbuch III* (1953), pp. 203 et seq.; *Beiträge zur Verhaltensforschung*, Schriftenreihe im Verlag Dunker & Humblot, Berlin, herausgegeben von G. Schmölders, vol. 1 ff. (since 1959).

Index

added value, in manufacturing industry, 209
admiration, need for, 37, 139
age
  and consumption level, 132
  and consumption standard, 130
  and income expectations, 68
  and mental attitude, 67
  and psychology of saving, 100
  and saving, 24
  and thrift, 60
  and wishes, 88
age–income combinations, and varying rates of saving, 117
agrarian society, 144–5
agriculture, tax compliance ratio, 160
alcohol, taxation of, 3
alcohol prohibition, 2–3
alternatives, decisions on, 149, 151
American institutionalism, 34
anthropological sciences, 35
anticipatory variables, 119–20
aspiration
  and age, 132
  and life cycle, 132
  theory of level of aspirations, 134
  versus saturation, 124, 125
aspiration levels
  and consumption standard, 124–35: items included in study, 126
  definition of, 124
  equipment level, 124
associations with taxes, 9, 189, 190
attitudes, 92
  age and mental attitude, 67
  change in, 146
  and economic development, 147
  to credit, 75
  to entrepreneurs, 154–5
  to money, 92–3: Freud on, 37
  to saving, 24
  and short-run consumer behaviour, 133
  to tax, 158, 196–7: Germany, 187
  to tax justice, 183
  to value of money, 106–7
attitudinal differences, and monetary decisions, 101–2
attitudinal variables, 113–14
Automatic Interaction Detector, 123

bank accounts, 117
bank rate changes, 226–7
behaviour, and economic development, 144, 146
behavioural approach to monetary theory, 89–124
behaviour research, 27, 35
  and forecasting of business trends, 216
behaviour theory concept, and economic growth, 141
'borrowing', versus *Schuldenmachen*, 114–16
borrowing power, 223
Britain, tax system, 194
budget management, and saving, 88
business barometers, 213
business forecasts, 218
business liquidity
  concept, 223
  and monetary policy, 227
business trends, surveys of consumer purchasing plans to predict, 216
Business Week, 215

calculation
  and subjective liquidity, 84
  use by private households, 80–2
  and wishes discussed, 86–7
Cambridge Rule, 42, 185
Canard Rule, 185
Capital, 154

capital formation, 136
capitalism, 144, 148
Capitalism, Socialism and Democracy, 144
cash budget management, 55
cashless payment transactions, 55–6
Central Archive for Empirical Social Research, 39
central bank policy, 226
character traits
 of entrepreneurs, 148
 and saving, 109
character types, and monetary decisions, 97
charitable donations of companies, 140–1
church tax, 161
citizenship, and tax, 165
civic duty, 8, 11, 12–13
Cologne Research Centre, 6, 39, 97, 126, 137, 141, 157, 193, 207
 study on monetary dispositions, 97
companies, spending policy, 140–1
computers, and social science, 94, 96
conformity, 21, 23–4, 48, 146
constancy, 23–4
consumer behaviour, short term, and expectations and attitudes, 133
consumer durable goods, 83, 85–6, 216
 ownership of, 124–5
 prediction of sales, 217
consumer goods
 differences in ownership, 127–8
 labour-saving products, 87
consumer purchasing plans, surveys to predict business trends, 216
Consumer Sentiment Index, 97
consumption
 prestige motive in, 138–9
 taxes on, 168
'consumption function', 214
consumption level, and age, 132
consumption patterns, 126
consumption standard
 and age, 130
 and aspiration levels, 124–35: durable goods selected for research, 134–5
 definition of, 124
 and education, 128
 and expectations regarding the general economic trend, 133
 and household size, 130
 and income, 125, 130–1
 and life cycle, 129, 130, 132–3
 and occupational groups, 126
 and occupational groups and income, 127
 and older people, 131
consumptive saving, 104, 105
credit, 61–2
 attitudes to, 75
cross-sectional analysis, income in, 63–6
cross-sectional studies, 62, 122
cultural traditions, 147–8
currency, 90
currency image/reputation, 106, 120

debt levels, and income expectations, 70
decision making, in parliament, 161–2
decision planning, centralized or decentralized, 150
decisions, production and investment, 215
decision theory, 151
Defence of Usury, 153
deflation, 222
demographic factors, as limiting conditions of behaviour, 117
demographic and psychological variables, 123
'demonstrative investments', 139–40
deposit money, *see* money in account
depth psychology, 38, 231, n. 47
Deutsche Bundestag (national parliament), opinion research on economic knowledge, 158, 161–3
differential representation of taxes, 9
direct extrapolation, 212
disposable personal income, 217
division of labour, between man and wife, 56–7
DIVO-Institute (Frankfurt), 106

earnings expectations, and investment decisions, 138
earnings motive, 147
econometrics, 214
economic behaviour, 30–1
  motivational factors, 148
  psychological variables in, 96–8
economic behaviour research, and psychology, 35–9
economic decisions, in households, 208–9
economic development
  and attitude, 147
  and behaviour, 144, 146
  and incentive taxation, 198–209
economic forecasts, 218
economic growth, 205
  behaviour theory concept of, 141
economic man, 18, 31, 230 n. 20
economic prediction, 32–3
economic prognosis, 211–19
  in communist countries, 214
economic psychology, 17–48
economic research, 27
economic thresholds theory, 163
education, 145–6
  and attitude to price and currency developments, 108
  and consumption standard, 128
  and ownership of consumer goods, 127
  and the psychology of saving, 100, 103
ego, in works of Adler, 38
election forecasts, 218
electric power sector, Germany, 213
Engel curve, 125
entrepreneurial behaviour, 136–49
  formation of, 148–9
  and independence, 141
  and market economy, 155–6
  motivation for investment decisions, 138
  and national character, 141, 142
  overreaching of abilities, 140
  and underdeveloped countries, 143
entrepreneurial decisions, 150
entrepreneurs, 205
  attitudes to, 154–5
  character traits and sociological circumstances, 148
  in the Federal Republic of Germany, 149–56
  feedback function in market economy, 153
  leadership role, 153–4
  as a motor of innovation, 153
  and rationality, 151–2
  and risk, 154
  role in the economy, 149–56
  role of, 136
equipment level, and household size, 132
ethnocentricity, 143
Europe, tax systems, 195–6
expectations, 92, 119
  and monetary decisions, 108
  regarding the general economic trend, 133
  and short-run consumer behaviour, 133
extrapolation method, 212–13

Fascism, 158
fashions, 23
fear, 37
Federal Republic of Germany, social market economy, 150–1
financial management, and financial assets, 53
financial mobility, 109
'financial psychology', 36
'fiscal policy' theory, 42–3
fiscal psychology, 41–2, 48, 157–64
  and public loans, 163–4
forecasting, 211
  and government policy, 219
  and human behaviour, 215
  and investment programmes, 215–16
  uncertainty in, 217
forecasts
  economic, 218
  election, 218
  German electric power sector, 213
  of sales of goods, 216

France, economic thresholds theory, 163
Freud, on attitudes to money, 37

game theory, 19–20, 32
German Economic Review, 17
German historical school, 2, 35, 40
Germany
  attitude to tax: by education, profession and social stratum, 188; by gender and age group, 187
  electric power sector, 213
  self-employed, 207–8
  tax mentality, 166–7, 186–92
  tax morale, 171
  tax system, 194
  view on tax evasion, 10
gold, 121–2
government policy, and forecasting, 219
Gresham's law, 41
group norms, and saving, 100
growth-oriented tax policy, 204

habit, and monetary transactions, 102–5
Harvard barometer, 213
hedonism, 28, 29, 30, 36, 229 n. 6
hire purchase, 69
historical school, 2, 35, 40
hoarding, 220
holidays, spending on, 76
homo economicus, 2
  see also economic man
household budget, and rationality, 77–89
household budget management, goals of, 85–9
households, 49–135, 64
  agreement of partners, 62
  calculation: and subjective liquidity, 84–5; and wishes discussed, 86–7
  cash budget management, 55
  cashless payment transactions, 55–6
  credit, use of, 61–2
  discussions about money, 59–60
  division of money in, 49–51
  economic decisions, 208–9
  equipment level of households, and life-cycle stage, 128–9
  financial assets and financial management, 53
  gender-based division of roles, 55, 234 n. 4
  goals of budget management, 85–9
  head of the house and the housewife, 49–56
  how money is managed in, 49–56
  income and behaviour, 62–9
  income expectations, 66–7
  joint preferences, 56–62
  major purchases, 61, 78
  managing deposit money, 55–6
  money management by profession and income groups, 52
  non-cash payments, 56
  non-core family members, 63–4
  rationality and the household budget, 77–89
  single-account households, 53–4, 55
  single-person households, 50
  'strong' households, 54–5
  subjective liquidity, 83–4
  thrift, 58, 60, 69–77
  with two accounts, 51, 53, 54
  use of calculation, 80–3
  women's role, 57
household size
  and consumption standard, 130
  and durable goods, 129
  and equipment level, 132
housekeeping, 49–50
  shopping lists, 79–80
human behaviour, social element of, 18
'human factor', 28

Ifo-Institute of Economic Research, 217, 218
incentive taxation, in economic development, 198–209
income
  and behaviour in households, 62–9
  and consumption standard, 125
  and consumption taxes, 195–6

income – *continued*
in cross-sectional analysis, 63–6
descriptive function of, 64
and income expectations, 68
meanings in socio-economic analysis, 62–3
and ownership of consumer goods, 127
and protection from taxation, 208
and socio-economic status, 65
income allocation, 92
income expectations, 66–7
and debt levels, 70
influence of income and age over, 68
influence of positive income experiences, 68
positive and negative savings, 69
and purchasing decisions, 100
income theory of money, 91, 221
'index of consumer attitudes', 217
'inducement mechanisms', 210
'industrial climate', 26
inflation, 107, 163, 222
innovation, 145, 153
instalment credit, 116
instincts, 33, 36
institutional constraints, 117
institutionalism, 33, 35
interaction terms, detection, 123
interest rates, 46–7, 108, 117, 118
International Association for Research in Economic Psychology (IAREP), 1
international liquidity, 89
international money markets, 122
intrinsic motivation to comply, 8
Introduction to Social Psychology, 22
investment, prestige motive in, 138–9
investment decisions, and earnings expectations, 138
investment programmes, and forecasting, 215–16
investments
'demonstrative investments', 139–40
inappropriate, 139

joint preferences, 56–62
Journal of Economic Psychology, 1
'Juliussturm', 162
'Julius-Tower' problem, 42
justice, notions of, 179–81

Kreisau Circle, 3

language, 21
large economic units, 20–1
life cycle
and aspiration, 132
and consumption standards, 129, 130, 132–3, 237 n. 77
and earning and spending, 129
and equipment level of households, 128–9
liquidity
objective and subjective, 224
and pessimistic business expectations, 226
and spending decisions, 108
liquidity preference, 36, 38, 102, 108, 223
liquidity theory of money, 219–28
location, choice of, 137–8
location theory, 138
Lonely Crowd, The, 23
longitudinal studies, 62–3, 66
luxuries
durable goods as, 125
and thrift, 76

macroeconomics, and psychology, 211–28
major purchases, 78
planning for, 79, 80
Man and Modern Time, 17
'man as a social being', 17–26
manufacturing industry, added value in, 209
market economy
and entrepreneurs, 155–6
function of entrepreneurs, 153
mental attitude, and age, 67
microeconomic causal analysis, 44
miserliness, 71–2
model approach, 94–6
monetary behaviour, limiting conditions, 117

monetary decisions
attitudinal and demographic determinants, 117
and attitudinal differences, 101–2
and character types, 97
and expectations, 108
monetary dispositions, 97
monetary policy
and business liquidity, 227
and empirical research, 117–23
monetary theory, 32, 224–5
behavioural approach to, 89–124
consequences of empirical research, 116–24
and empirical research, 93–116
and prediction, 92
and the 'specifiable condition', 117
monetary transactions, habitualized, 102–5
money
alternative forms of, 121
definitions of, 89–90, 92
as symbol, 92–3
theory of, 90–3
money in account (deposit money), 220, 224, 227
money illusion, 120, 121, 222, 225
money management, by professional and income groups, 52
motivated behaviour, analysis of, 92
motivational factors, economic behaviour, 148

national character, 146–7
Nazism, 158
negative perceptions of tax, 10
negative savings, 69
norms, 11
Norway, 238 n. 10

objective liquidity, 224
objective rationality, 152
occupation, and tax morale, 172
occupational choice, 205
occupational groups
and consumption standard, 126
income, and consumption standard, 127
occupational structure of countries, and tax, 195
older people, and consumption standards, 131
oligopoly theory, 19
open market operations, 227
optimism, 114, 120, 133
ownership differences, consumer goods, 127–8

panic, concept of, 37
pay cheques, 105, 118–19
personal freedom, 22
pessimism, 114, 120, 133
pessimistic business expectations, and liquidity, 226
Philippines, 204
planned behaviour theory, 8
poverty, 197–8
prediction, and monetary theory, 92
prestige motive, in consumption and investment, 138–9
price development, 106
price rises, 121
price theory, 221
Primeval Man and Modern Civilization, 20
principles of taxation, 181
private households, *see* households
'problem-solving behaviour', 96
production and investment decisions, 215
profession
and associations with tax, 190
and attitude to price and currency developments, 108
and perceived fairness of tax, 191
professional and income groups, money management, 52
professions, 51
profit maximization, 137, 138, 149
'profit motive', 23
prognosis
based in analogy, 214
for individual businesses, 219
'phase shift', 214
via induction, 213
proportionality, 181, 242 n. 50
psychic 'thresholds', 225

psychoanalysis, 34
psychological and demographic variables, 123
psychological variables, in economic behaviour, 96–8
psychology
  and economic behaviour research, 35–9
  and macroeconomics, 211–28
  and problems of motivation, 35–6
Psychology of Adjustment, The, 33
psychology of saving, 99–102
  and age, 100
  and education, 100
  marital status of respondents, 101
  survey questions, 99–100
psychology of taxation, 157–210
  early studies, 193
public finance
  roots of, 158–9
  and Schmölders, Günter, 6–13
public finance theory, 184
public loans, and fiscal psychology, 163–4
purchases, large purchases and economic habits, 75
purchasing decisions, and income expectations, 100
purchasing power, 220
  versus value of money, 106–14

quantitative analysis, 221
quantity theory of money, 219, 221

Radcliffe Report, 223, 225, 227, 228
rationality
  and entrepreneurs, 151–2
  and the household budget, 77–89
  and tax justice, 183–4
'rationalization', 140
rational reasoning, and tax, 199
rational theory, contrasting programme to, 26–39
'reconstructive imagination', 2
religion, 25
resource allocations, 151
risk, 154
role expectations, 146
Rowntree's theory, 24
'sacrificial saving', 54, 69
saturation, 125
  theory of, 134
saving
  and age, 24
  attitudes to, 24
  and budget management, 88
  and character traits, 109
  and group norms, 100
  mode of payment by account type, 105
  psychology of, 99–102
  reasons for saving, by account type, 104
  and social constraints, 100
  surplus, 69
  and thrift, 109
saving behaviour, tree analysis of subject data, 111, 112
saving mentality, 25
savings
  capital accumulation, 104
  consumptive, 104
  precautionary, 104
  reasons for, 85
savings banks, 103
savings deposits, tax allowances for, 243 n. 64
savings goals, 46
Schmölders, Günter
  and the Kreisau Circle, 3
  and public finance, 6–13
  works of, 1–2
Schuldenmachen, versus 'borrowing', 114–16
sectoral tax exemptions, 204
selection, 21
'selective choice', 29
self-employed, Germany, 207–8
shadow economy, and tax morale, 12
shopping lists, 79–80
short-run consumer behaviour, and expectations, 133
simulation, 123
  and social simulation problems, 123–4
single-person households, 50
smuggling, 175

social constraints, and saving, 100
social constructivism, 7
social determination, 19, 20
social element, of human behaviour, 18
social market economy, 150–1
social prestige, 25–6
social psychology, 18
social representations, 8, 9
  of taxes, 7
social science, and computers, 94, 96
socio-economic behaviour research, 39–48
'Socio-economic Behaviour Research', lecture course, 47
Spain
  company taxation, 202
  perceived variations of tax liability, 201, 202
  tax system, 200–3
'specificiable conditions', institutional constraints, 117
spending decisions, and liquidity, 108
spending policy of companies, 140–1
stagnant economy, 142–3
standards, 146
state, feelings towards, 9–11
strategic variables, 210
subjective liquidity, 109, 224
  and calculation, 84
  private households, 83–4
subjective value theory, 29
success motive, 148
surplus saving, 69
Survey of Consumer Finances, 97, 115, 117
surveys, 93, 122
  and anticipatory variables, 119
  need for new analysis techniques, 122–3
systems theory, 152

taboos, 22–3
'take off' theory, 143
tax
  associations with, 9, 189: by profession, 190
  attitudes to, 158, 196–7
  change of emphasis, 197
  church tax, 161
  and citizenship, 165
  compliance ratio, 160
  on consumption, 168
  differential representation of, 9
  enforcement techniques, 193
  incentive taxation, 198–209
  indirect, 184
  individual resistance to, 160
  influence on behaviour, 196
  negative perceptions of, 10
  object-bound assessment criteria, 200
  perceived fairness of, by profession, 191
  principles of taxation, 181
  and rational reasoning, 199
  sense of imposition, 167–8
  social representations of, 7
  tailored income tax, 203
  upper psychological limit, 164
  views on, 10
tax administration, 6
'tax announcement effects', 159
taxation, psychology of, 157–210
taxation of alcohol, 3
tax behaviour, research on, 6
tax burden, 166–7
'tax dodging', 158, 161, 172–3
tax erosion, 197–8
tax evasion, 10–11, 175
tax justice, 178–86
  attitudes to, 183
  and rationality, 183–4
  and voters, 182
tax mentality, 9, 42, 159–60, 165
  Germany, 166–7, 186–92
  in international comparison, 192–8: policy implications, 195
  interview research on, 161
  measurement, 197
tax morale, 9, 11, 42, 168–9
  concept, 7
  definition of, 11
  Germany, 171
  and higher education policy, 11
  as internalized obligation to pay tax, 12
  and occupation, 172

tax morale – *continued*
reasons for loose, 171
and the shadow economy, 12
strengthening and improvement, 177–8
and tax resistance, 164–78
variations in, 170
taxpayers, motivations and reactions, 159
tax policy
effects on the economy, 206
growth oriented, 204, 206–7
tax resistance
definition of, 173
external forms of expression, 174
and tax morale, 164–78
unlawful or 'active', 175
'technical creativity', 144
technical progress, 146
textile industry, 215
Theory of Economic Development, 153
thrift, 58–9, 69–77
and age, 60
functional or sliding, 73
internalized principles, 74
and luxuries, 76
and personality structures, 74–5
and saving, 109
and value systems, 73
time series, 122
trade unions, 155
traditions, 146, 147–8
turnover velocity, 222

uncertainty, in forecasting, 217
underdeveloped countries, and entrepreneurial behaviour, 143
utility maximization, 138

value added, breakdown of increase in, 209
value of money
attitudes to, 106–7
versus purchasing power, 106–14
values, 146
value systems, and thrift, 73
value theory, 29–30
'velocity of circulation', 91, 220, 221, 225
Verstehen approach, 2
veterinary ethology, 38
volume of money concept, 222, 223
voters, and tax justice, 182

wages, payment methods, 105
wishes, 86–8
and age, 88
women
and managing deposit money, 56
role in household, 57