

The Economic Psychology of Adolescent Saving

Submitted by Annette Michaela Cosima Otto, to the University of Exeter as a thesis for the degree of Doctor of Philosophy in Psychology, June 2009. This thesis is available for Library use on the understanding that it is copyright material and that no quotation from the thesis may be published without proper acknowledgement.

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Abstract

The thesis addressed the saving behaviour of adolescents within the social context of the family, which has received little attention to date. The research regarded adolescent economic socialization and the development of saving behaviour as an integral part of general socialization and adolescent psychological development.

The importance of saving was investigated relative to alternative ways for getting larger sums of money. Three large survey studies with adolescents and one survey study with adolescents and their parents were carried out. In Study 1, 470 students between the ages of 11 and 18 took part. The results of this study revealed that adolescents do think of saving as a means of accumulating larger sums of money. Studies 2 and 3 sampled 290 and 443 students between the ages of 11 and 17 and 13 to 14, respectively, providing empirical evidence of adolescents' endeavour for independence, reflected by their saving motives as well as the changing of their attitudes towards saving as a skill. The thesis examined a number of significant predictors for adolescents' general tendency to save.

The studies linked adolescent saving with home atmosphere and perceived parenting style empirically for the first time. A path model illustrates the associations that were found between the behaviour and attitudes of the parents and the saving behaviour and attitudes of their adolescent child. It demonstrates that the development of saving behaviour is linked to the power relationship between parent and child. The findings support the behavioural life-cycle hypothesis as well as the benefits of being raised in an 'authoritative home' with regard to skills in saving.

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Preface

This thesis investigated the saving behaviour of adolescents. Specifically, I investigated the development of saving behaviour during a period of time that has received little systematic empirical or theoretical analysis (i.e. adolescence). Although adolescence is routinely assumed to be an important period for the development of economic behaviour, research typically focused only on children or adults. The thesis starts with two introductory chapters that review the research on adult saving, children's saving, as well as what is known about adolescent saving. The first chapter discussed the economic psychological approach to saving, while the second chapter examined why the study of adolescent saving would benefit from a general socialization approach. Together, they provide the background for the investigation of adolescent saving as part of becoming an economic agent.

The research made two contributions: to provide empirical evidence for the importance of saving during adolescence, and to build links between the saving behaviour of children and that of adults. Specifically, I used a context-based approach that took into account the interactive relationship between the adolescent and the immediate environment (the social context of the family). Within this framework, I explored what role parents play in the development of their adolescent child's saving behaviour. In the final empirical chapter, the direct, as well as, indirect influences of parents on their adolescent child's saving behaviour were illustrated in a path model. The results highlight the link between the saving behaviour of adolescent economic agents and the general psychological development of adolescents within the social context of the family.

Chapter 1 - An Economic Psychological Approach to Saving

1.1 Introduction

Given the importance of personal saving for well-being and the economy, economists and psychologists have investigated the saving behaviour of individuals with great interest. However, the saving behaviour of younger people has been a neglected area. This chapter has three aims: to demonstrate the significance of the topic, to explain why adolescent saving behaviour will be investigated from an economic psychological perspective, and to introduce what is known from the literature of saving behaviour of adults, as this work -together with the work described on children's saving in Chapter 2- forms the starting point for the research presented in this thesis. The review includes a presentation of economic and psychological theories of saving, the description of a number of saving definitions, saving estimates and a selection of empirical studies that help us understand the saving behaviour of adults as investigated by various researchers in the field.

1.2 Significance of topic

Why is adolescent saving behaviour a suitable topic of investigation? First of all, it should be noted, that during the last two decades, the saving rates of households have fallen largely in many of the rich OECD countries. Differences can be observed between the so-called 'Anglo-Saxon countries' (America, Canada, Australia, New Zealand, and Britain) with saving rates that are among the lowest, and countries like France and Germany, for example, where such a reduction in savings did not take place (Wilkinson, 2008). The growing body of research on household saving and saving behaviour of individuals has tried to establish appropriate ways to measure the savings of a country, to understand the saving motivations and the saving behaviour of people at different ages, with the aim to finally encourage saving

through appropriate government policies. While the ‘early years’ have repeatedly been referred to as the ‘important years’ with regard to the development of money attitudes, saving attitudes, money management and saving behaviour (Ölander & Seipel, 1970; Moschis & Churchill, 1978; Furnham, 1984; Webley, Burgoyne, Lea, & Young, 2001), few attempts have been made to investigate this systematically above the age of 12. Such an investigation would be interesting in its own right, because it should further our understanding of the development of this specific economic behaviour and the existing saving theories. However, an in-depth investigation of the saving behaviour of adolescents is timely, because the saving rates of households in Britain have fallen, and a better understanding of the development of saving behaviour could help improve programs that aim at encouraging positive financial behaviours of individuals. The investigation of adolescent saving is also timely, because in Britain, debt seems at record level and a growing number of young people are already affected (YouGov survey, Rainer, 2008). Be it their increased use of mobile phones (Moneyminded, 2007) or their poor financial literacy (Chen & Volpe, 1998), there is by now a great need to teach young people how to manage money (pfeg¹, 2007). Financial education programs are geared towards positive financial behaviours. They aim at increasing savings, improving personal financial planning, financial knowledge, as well as financial management of income and credit (Xiao, 2008; Dickinson, 1996). The hope of financial educators is to eventually help improve the financial well-being of individuals. Derived from the definition of general well-being (Zimmerman, 1995), Joo (2008) suggests that financial well-being may mean a state of “being financially healthy, happy, and free from worry” (p. 21). By now, as documented in the first MoneySense Research Panel Report (RBS, 2008), at least 35 percent of the young people over 17 tend worry about money, while at age 11, this already seems to be the case for 16 percent. Accumulating debt at a young age certainly does not assist a smooth start as economic agent. The relevance of the study of adolescent saving behaviour also comes to the fore in the newly established possibilities for teachers to include financial capability teaching as part of the existing citizenship lessons as well as the government plans to add a new course called ‘economic wellbeing’ (BBC News, 2008). The observed lack of interest in the development of economic concepts and use of money nearly three decades ago (Jahoda, 1979; Stacey, 1982; Burris,

¹ Pfeg (Personal Finance Education Group) is the UK’s leading finance education organisation (an independent charity helping schools to plan and teach personal finance relevant to students’ lives).

1983) has changed into an awareness of and a concern for children's money management as a 'crucial skill' (BBC News, 2008).

1.3 The role of saving behaviour in economic psychology

According to Katona (1975), "Saving represents that part of income which is reserved for future use and may therefore serve to create enduring wealth" (p. 229). Katona points out how the economy is retarded or accelerated by changes in collective saving decisions. For the individual, the absence of financial worries, which could be helped through saving, is associated with subjective well-being (Howell, Howell, & Schwabe, 2006; Hayhoe & Wilhelm, 1998).

Economists have studied saving for centuries, while psychologists have started their investigations of this specific economic behaviour no more than a few decades ago. However, traditional economic studies have provided rather incomplete answers to questions about who saves and why people save and about the circumstances under which people save more or save less (Katona, 1975). Saving research is an area where economists have successfully appealed to psychology for explanations and a better understanding of people's behaviour (Mullainathan & Thaler, 2004).

1.3.1 The economic psychological approach

The interplay between economics and psychology or the interdisciplinary framework of economic psychology or behavioural economics has not been without problems. For more than 100 years, a number of attempts have been made to integrate psychological findings into economic theory (Coats, 1976).

Psychology is the science of human behaviour, and therefore, naturally, encompasses the study of economic behaviour (Fiedler & Wänke, 2004).

"Economics is the science which studies human behaviour as a relationship between ends and scarce means which have alternative uses" (Robbins, 1932, p.31).

The science of psychology developed later than the science of economics and the two disciplines differ in their approaches, theory development, research methods and level of analysis. Economists are primarily concerned with the study of the behaviour of groups of agents and markets in particular, while psychologists are more concerned with the study of the behaviour of single individuals and their motivation (Wilkinson, 2008). This does not mean that psychologists are not interested in the behaviour of groups. Social psychologists are concerned with the behaviour of groups, and when they look at groups they do not always reduce them to a collection of individuals (see Haslam, 2004 for an overview). From an economic psychological point of view, “everything that happens in the economy happens as a result of the behaviour of some individual. (...). If we are to understand the economy, we must understand the behaviour of the individuals within it” (Lea, Tarpy, & Webley, 1987, p. 133).

Traditionally, economic models are based on the assumption that individuals have consistent preferences and that these follow the principle of expected utility maximization (Wilkinson, 2008). Economists assumed that people function entirely on a rational basis. They implied that people are able to maximize utility in a complex world, by being well informed and able to plan ahead (at will). However, a large number of behavioural studies have demonstrated that these assumptions are not always in line with the actual behaviour of human individuals (Leiser, Azar, & Hadar, 2008). When psychological theories and methods are used to study economic behaviour or economic problems, the following two approaches can be distinguished. The concept of economic psychology is used for the investigation of processes and mechanisms that underlie economic behaviour. The concept of behavioural economics is used when psychological thinking is included and psychological methods are applied to economics (Wärneryd, 1999). According to Maital (1986), the field of behavioural economics is concerned with the study of that part of human behaviour that is related to economic matters. Behavioural economics aims to model ‘real man’ behaviour as opposed to ‘economic man’ behaviour, through the incorporation of behavioural and socio-psychological mechanisms that underlie economic behaviour.

“Behavioural economics increases the explanatory power of economics by providing it with more realistic foundations” (Camerer & Loewenstein, 2004, p.3).

In doing so, it should be noted that the behavioural economics approach extends the rational choice and equilibrium models. This does not mean that behavioural economics is in favour of abandoning these models (Ho, Lim, & Camerer, 2006). The contribution of traditional economic models is unquestioned in their aim to build a logical, comprehensive and precise model of economic behaviour. As a result of market forces, such models are particularly useful for an explanation of outcomes on the market level. However, to fully understand individual level decisions, in some contexts, the application of insights from psychology to economics, through a consideration of psychological and social motivations underlying economic behaviour of individuals, can be useful (Leiser, Azar, & Hadar, 2008).

A simple example of a sub-optimal consumer decision demonstrating behaviour that is not in accordance with utility maximization can be seen in people’s willingness to spend one hour to save \$ 10 on a \$ 20 good, and at the same time spending \$ 30 on a \$ 300 good to save one hour (Azar, 2007). More specifically, with a number of experiments, Azar demonstrated that people do not consider the absolute price difference between two identical goods when one is available at a close and the other at a remote store, but the relative price difference. People apparently behave in such a way because they base their decisions on the perception of the amount they could save in relation to the price of the good. Another example and probably the most famous illustration of a model alternative to the standard economic model is prospect theory (Kahneman, & Tversky, 1979; Tversky & Kahneman, 1992). Prospect theory relies on loss aversion and reference dependence (both psychological principles) and helps explain well-documented individual choices that the standard economic models could not account for. Over the past few decades numerous behavioural studies and experiments have proven that human behaviour is not fully rational. Consumer behaviour is often biased and their decisions are affected by context (different framing effects). An example of a framing effect, affecting someone’s desire to save for retirement has been demonstrated by Madrian and Shea (2001). The framing of the options in the retirement plans offered by the employer (‘enrol’ or ‘opt-out’)

influenced participation: automatic enrolment largely increased the participation of poorer workers.

Economic psychology is referred to by Wärneryd (1988) as the common ground of interest for economists and psychologists. Economic psychology is concerned with the study of economic behaviour (Van Raaij, 1981). This also includes the causes and consequences of economic behaviour. Economic behaviour is all behaviour that involves economic decisions. In some ways, many decisions are economic decisions. Hence, the area of economic psychology is a broad field (Allen & Ng, 2004). Economic behaviour offers interesting problems for psychological research. Economic psychology studies human behaviour within the constraints of the perceived economic environment (Van Raaij, 1981). This notion is grounded in the Lewinian function $B = f(P,E)$, which illustrates that behaviour (B) is a function of personality variables (P) as well as environmental (economic) variables (E). The notion that man is a social being and that the interaction among people should form the basis for a theory of economic behaviour was proposed by Tarde in 1902 (Wärneryd, 1988). This refers to the fact that the area of social psychology is related to economic psychology. Other areas of psychology related to economic psychology are cognitive, experimental and organizational psychology (Van Raaij, 1981; Jacoby, 1976).

For economic psychology, the following definition has been agreed upon when the International Association for Research in Economic Psychology was founded:

“Economic psychology as a discipline studies the psychological mechanisms and processes that underlie consumption and other economic behaviour. It deals with preferences, choices, decisions and factors influencing these, as well as the consequences of decisions and choices with respect to the satisfaction of needs. Furthermore, it deals with the impact of external economic phenomena upon human behaviour and well-being. These studies may relate to different levels of aggregation: from the household and individual consumer to the macro level of whole nations” (Wärneryd, 1988, p. 9).

As a field of study, economic psychology is problem-oriented (Van Veldhoven, 1981), since economic psychological studies take their research problems from economic reality rather than from theory. The types of economic reality concern the consumer marketplace, business behaviour and entrepreneurship, and the society with people's reactions to economic policy measures. There is however no strictly defined area or field of research for economic psychology (Wärneryd, 1988). Using the basic ideas of economics and psychology, economic psychology is naturally conceived as interdisciplinary. This means that its development is dependent on the exchange of ideas of those two disciplines. In addition, economic psychology can be assumed to feed back and thereby change both of its parent disciplines.

The economic approach to saving

For an understanding of the developments within research on saving by economists, a brief description of the key models and hypotheses that have been brought forward is given. Keynes (1936) introduced the notion of marginal propensity to save (Keynes' Absolute Income Hypothesis). Marginal propensity to save refers to the increase in savings as result of an increase in income. The absolute income hypothesis is based on the idea that saving is only possible, if someone has more than enough to meet the basic needs. This means that someone can only save what is left over once essentials have been paid for. The absolute income hypothesis seems plausible and can be considered very basic. If someone has nothing left over but needs all earnings to cover for living expenses, one will simply not be able to save money. Saving is seen as a result of the ability to save.

An alternative approach to Keynes' Absolute Income Hypothesis is the Relative Income Hypothesis by Duesenberry (1949), which allows for social comparisons and perceived position in reference groups. His theory states that people make comparisons with the consumption levels (standard of living) of relevant others. This means that the more often someone sees that relevant others own a certain good, the higher the motivation to also buy a similar product. Work by Kapteyn (2000) and Schor (1998) suggest that the idea that social comparison mechanisms are important for saving behaviour is justified. Kapteyn showed that the saving behaviour of members of households is affected by the incomes in their reference group. When a

household feels worse off compared to relevant others, the savings of that household are likely to be lower.

The life-cycle hypothesis introduced by Modigliani and Brumsberg (1954) is one of the most important economic saving theories. The essential idea of the life-cycle hypothesis is that individuals (or households) try to keep their expenditures constant over the life-cycle. At times in life when income is lower than expected average life-cycle earnings, money would be borrowed; when income is higher than expected, the surplus would be saved. By doing this, consumption is smoothed at a certain (own standard of living) level. In other words, people are expected to optimize expenditure over their life span. The life-cycle hypothesis is not without shortcomings. The theory predicts differences in saving behaviour over the life cycle, but many studies (King, 1985; Juster, 1986; Thaler, 1990, 1992) could not confirm the expected saving behaviours of individuals or households at different stages in the life cycle (the young and old people did not behave as predicted). According to the life cycle hypothesis, old people should spend more than they do and young people should borrow. Examples of reasons for people behaving different to this standard framework are that people have limited planning skills or they fail to formulate sophisticated plans and sometimes make choices that are financially inefficient (Bernheim & Rangel, 2004). In addition, in the context of saving for example, Bernheim and Rangel highlight the fact that people seem to choose (or go with) default options. They use this term to describe options that are the result of inaction, when people save the cost of decision-making or choose the default option because they believe that it will be the better choice because it is offered as the default. This effect is related to the example given before, where participation in retirement plans (of poorer workers) was influenced by what the default option was (Madrian & Shea, 2001).

Friedman's permanent income hypothesis (1957) is an extension of the life cycle hypothesis. It is also based on the perception of one's present and future income. When income is higher than the permanent income somebody considers to be his or her comfortable (and realistic) level of income, money is saved for a period in life where income might be below this personal permanent income level. According to

Friedman, people also save because of a bequest motive, the motivation for saving to leave an inheritance.

The behavioural life-cycle hypothesis (Shefrin & Thaler, 1988) is linked to the life-cycle hypothesis but incorporates self-control, mental accounting and framing (how alternatives are perceived from a chosen point of reference). First of all, through the inclusion of self-control the behavioural life-cycle model acknowledges that saving is difficult. The fact that refraining from consumption may be difficult was not considered in the life-cycle hypothesis. While the life-cycle hypothesis models 'economic man', the behavioural life-cycle hypothesis is closer to modelling 'real man'. The difficulties someone can experience with saving are illustrated by Shefrin and Thaler (1988) using a two-self model. The 'planner', who is concerned about the future and the 'doer', who is concerned about short term gratification, are two roles that co-exist within an individual (this model is described in paragraph 1.4.2). The concept of mental accounting was introduced by Thaler (1980). Shefrin and Thaler (1988) suggested that people treat income from different sources differently. Households are assumed to treat components of their wealth as non-fungible. Three mental accounts are considered to be relevant when people think about their wealth. These are: current income, current assets (savings), and future income. The temptation to spend money is supposedly the greatest for current income. In addition, the marginal propensity to save or spend is different for each of these mental accounts. The differences in the marginal propensity to save or spend money from the different mental accounts explain a good deal of the empirical differences found with regard to the life-cycle model. One reason for small windfall gains to be spent for example is that people tend to perceive small windfalls as current income. Framing effects have been explained above. Another nice example of this effect has been demonstrated by Epley, Mak, and Idson (2006) using two experiments. Once, they framed income as a gain (bonus) and once as a returned loss (rebate). This difference in framing resulted in differences in spending.

The economic psychological approach to saving

Psychological approaches to the study of saving were presented by Ölander and Seipel (1970), who examined saving as a decision process. Their model covers both consumption and saving and contains a number of steps.

First, an individual needs to perceive a saving situation and courses of action, then, the consequences of each course of action are determined as well as the probabilities of the relationships between the actions and their consequences. These will in a next step be evaluated and judged according to utility. This means that an individual will double check whether the consequences are in line with his or her general aims before a choice is made with regard to the course of action. This decision model is combined with a stimulus-organism-response (S-O-R) model. Stimulus variables that are considered to influence saving are for example income and changes of income and socio-demographic variables. The variables they considered to be organism variables relate to the decision process (the perceived value, the subjective evaluation of the consequences and saving goals) as well as attitudes and personality traits. Saving and budgeting habits are examples of response variables.

Katona's (1975) theory of saving is based on the assumption that saving/consumption is dependent on the ability to save/ consume and the willingness to save/ consume. Someone's ability to save/ consume is defined as disposable income and someone's willingness to save/ consume is assessed through interview data on financial expectations and attitudes. This theory is based on a combination of economic and psychological variables, but still, it is one of the more simple models. Katona (1975) stressed the importance of income but thought of the absolute income hypothesis as being too simplistic. Simply having money left over after expenditures on necessities does not mean that this money has been saved or will be saved. To predict saving, the willingness to save needs to be considered as well. In other words, those who are able to save still need to choose to do so, that is, they have to make a decision that requires some degree of willpower.

Katona claims that willingness is determined by the economic environment and people's perceptions of it (1975). Consumer expectations and consumer sentiment will impact on saving decisions as well as pessimism and optimism with regard to a

general and one's personal evaluation of the economic situation. While people save for different reasons, Katona assumes that someone's personal evaluation of the economic situation will influence contractual as well as discretionary saving decisions.

In Chapter 2, when the literature on saving in childhood and adolescence is reviewed, potential links between the theories of adult saving described above and the saving behaviour of adolescents will be highlighted. In doing so, overlap and differences between the economic world of adults and that of adolescents will be discussed as well.

Because economic psychology as a discipline investigates the psychological mechanisms and processes that underlie economic behaviour in general and saving behaviour in particular, to further our understanding of the processes and mechanisms that are involved in the development of saving behaviour during adolescence, an economic psychological approach will be taken. Although a single economic-psychological approach does not exist (Webley et al., 2001), the development of saving behaviour lends itself to this field of study for a number of reasons. First, research on saving is a fruitful area of economic psychology, because in the past, economists have already appealed to psychology, to investigate the saving behaviour of individuals (Lea, Tarpy, & Webley, 1987; Mullainathan & Thaler, 2004). Second, the investigation of the development of a specific economic behaviour falls into the domain of economic socialization research. Furthermore, looking at economic socialization during adolescence alludes to the topic of developmental psychology and adolescent development. In addition, as pointed out by Webley, Levine, and Lewis (1991), the investigation of children's saving behaviour asks for an approach that acts on the assumption that children's saving behaviour can to some extent be considered 'social'. In their study, the saving and spending decisions made by six-, nine- and 12-year-old children seemed to depend on negotiations between the children and their parents. Thus, children's and adolescents' saving behaviour should not be seen as an isolated activity that is purely economic, but rather as an economic activity that develops in a social (family) environment. This is in line with Tarde's (1902) notion that man is a social being and that interaction among people should be the appropriate basis for a theory of

economic behaviour (Wärneryd, 1988). Research on the development of saving during adolescence is further suitable for an investigation within economic psychology, because the problem is derived primarily from economic reality (Van Veldhoven, 1981). In addition, the study of young people's saving behaviour and how it could be encouraged is a policy issue, which is one of the features of this discipline (Webley & Wahlund, 1997).

1.3.2 Saving definitions

Economists aim at predicting saving of individuals or households on a macro level. In doing so, someone's income is considered the most important factor in the prediction of saving (Groenland, 1999). The most straightforward definition of saving in economic contexts is that it is the excess of income over consumption over a certain period of time (Wärneryd, 1999). With such a definition, saving is considered the residual of income minus current consumption (Browning & Lusardi, 1996). This implies that saving takes place when money is left over. This form of saving has been referred to by Katona (1975) as residual saving. Katona distinguished between three types of saving which differ with respect to the decisions that precede them: residual saving, contractual saving, and discretionary saving. For residual saving, no active saving decision is needed, because saving equals having money left-over. 'Contractual saving' refers to regular savings like a retirement pension scheme, buying a life insurance, putting money towards Christmas (Christmas saving clubs) or buying on an instalment plan (requires regular saving at a later point in time to pay off the debt). For contractual saving, at least one decision is needed (in the past) to set aside a certain amount of money as soon as the income is received. 'Discretionary saving' refers to the freedom to save or to spend the money that is available after expenditures on necessities. This means that this type of saving happens whenever someone decides in advance that a certain amount of money should be left at the end of a certain period of time. As a consequence, discretionary saving decisions are constantly made (and possibly adjusted). This demonstrates that the different types of saving differ with regard to the required self-control and ability to delay gratification. Furthermore, it should be noted, that the time period matters for all definitions, because in one year for example, there may be

excess of income over consumption in the months preceding a holiday, but not in the months after the holiday.

The psychological research on saving focuses on the processes in the period where money is not spent in order to be used in a later period. Saving behaviour implies the perception of future needs, a saving decision and a saving action (Wärneryd, 1999). Many concepts have been used to explain the psychological link between perception and action, such as willpower, delay of gratification, values and attitudes (Thaler & Shefrin, 1981).

While economists and psychologists have defined saving in these different ways, people are likely to think about saving yet differently again. In the Netherlands, respondents from a large panel study (DNB Household Survey) were asked about the extent to which they consider certain acts as ways of saving (Wärneryd, 1999). Set up in 1991, this panel (*the CentERpanel*) consists of more than 2000 households and is representative of the Dutch population. The results suggested that saving is considered equal to investing (i.e. buying shares or bonds, investing in mutual investment funds, or buying securities), putting money in a bank account, speculating and paying off mortgages (Wärneryd, 1999). Groenland, Bloem, and Kuylen (1996) found out that people also strongly think of pension scheme saving as a typical form of saving. In addition, participants of the Dutch Panel seemed to distinguish between putting money in a savings account and putting money in a money box (Wärneryd, 1999). This reflects that there is a time dimension to saving. Money should be kept for a certain minimum of time to be considered as money that has been saved.

This time dimension is probably particularly relevant to the study of saving behaviour in children and young people, who are not (yet) able to anticipate long periods of time (Friedman, 2000, 2005). It is possible that a child thinks of spending his or her Christmas money the day after Boxing day on something 'big' as something he or she has bought with money he or she has saved, merely because the money has not been spent on something else, something s/he would have wanted to buy too. This means that children may not think about the time they have kept money for, when they talk about saving, but about the mental effort or the self-control they needed to bring up in order to spend their money on what they liked most. With

regard to putting money in a bank account as a form of saving, it should be noted that children as young as five or six have been found to think of a bank as a source of money (Berti & Bombi, 1988, p. 85), or to think of money in the bank as money that is lost (Sonuga-Barke & Webley, 1993; Webley, Levine, & Lewis, 1991). With age, the perception of the bank as a place where money can be saved, changes. Ten- to 12-year-olds seem to associate bank saving with interest and with the possibility to keep it safe from oneself. This means that they think the bank can be used to help them deal with spending temptations (Sonuga-Barke & Webley, 1993; Webley, Levine, & Lewis, 1991).

Adolescents² are more likely to think of saving as the act of putting money in a (piggy bank or) bank account (Furnham & Thomas, 1984a), but they are unlikely to think of saving in terms of the pay-off of mortgages. Which other forms of saving adolescents would consider has not been investigated yet. To study saving during adolescence, saving will be defined as the process of saving when money is deliberately put aside (piggy bank or bank account), kept at home or left with parents for a certain period of time, because a saving decision has been made. This implies that the adolescent has to apply strategies to delay gratification.

1.3.3 Saving estimates

How can saving be estimated best? The different forms of saving described before involve a number of different measures. Lunt and Livingstone (1991) for example, distinguished between recurrent saving and total savings. Recurrent saving is considered as saving that is carried out on a regular basis, while total savings include liquid assets in someone's bank account, building society, as well as money that is kept at home (in old socks, in money jars or piggy banks).

In his study on saving behaviour of households, Lindqvist (1981) used four estimates of saving: stated bank saving (bank accounts, stocks and bonds), repayments of debts, total savings and a liquidity estimate (the amount of money the household could withdraw from the bank at the time of the interview).

² For the purpose of this thesis, the term child will be used to refer to zero to 10-year-olds inclusive, the term adolescent will be used to refer to 11- to 18-year-olds and the term emerging adult will be used for 19- to 25-year-olds. However, these are convenient labels not hard boundaries (see Chapter 2, paragraph 2.3.3).

When Nyhus (2002) investigated the psychological determinants of household saving behaviour, she included measures such as discretionary saving, repayment of debts, repayment of mortgages, and total saving. This shows that she looked at contractual and discretionary household saving separately. Making this distinction was appropriate as the results of her study showed that repayment of loans and discretionary saving are not determined by the same factors. Of those two saving measures, discretionary saving is of more interest to psychologists, because people make saving and spending decisions about their discretionary income.

Total savings (discretionary saving and the repayment of loans and mortgages) may be more accurate than simply asking people whether and how much they have saved for example last year. However, even with adults, one cannot be sure about how meaningful the amount of money in a savings account is, as an indicator for saving behaviour to have taken place. Money in a savings account could be inherited or a gift and therefore not reflect someone's saving efforts or it could be money that is left over and therefore reflect residual saving.

When children's saving behaviour was investigated by means of experiments (Sonuga-Barke & Webley, 1993; Webley, Levine, & Lewis, 1991; Otto, Schots, Westerman, & Webley, 2006), the experimental set-up was designed in such a way that finishing the game successfully was an indicator for saving behaviour to have taken place. During those games, children were required to save up tokens for a chosen target toy. In Keynes' (1936) terms, this type of saving can be considered purposeful saving as motivated by foresight or goal saving.

For an investigation of children's and adolescents' saving behaviour by means of survey studies, different researchers have used different questions. For instance, Furnham and Thomas (1984a) used four questions to gather information about the saving behaviour of seven- to 12-year-old children. A general question 'Do you save any of your pocket money?', followed by 'How much money have you saved?', 'Why do you save money?', and 'Where do you put the money you save?'. These questions are relatively general and open, since the time period, children are supposed to think of has not been specified. It remains unclear, for example, whether

the children are supposed to think of how much money they have saved during their life or during the last two weeks. When Marshall and Magruder (1960) explored whether specific parent money education practices affect children's knowledge and use of money, one question that concerned children's experiences with money tapped into the child's saving behaviour. The children were asked whether they had ever saved up for a named item at least three times the amount of money available to spend during the past week. While this is more specific, a weakness of this measure would be that a child that has saved up twice the amount of money available to spend during the past week would be classified as someone having no saving experience. The items used by Hollister, Rapp, and Goldsmith (1986) also included a specified time period ('I save money for more than two months for no specific purpose'; 'I save money for less than two months for no specific purpose'). However, having saved money for more (or less) than two months for no specific purpose may represent a lack of spending opportunities (i.e. residual saving) rather than a child's actual saving behaviour (i.e. discretionary saving). In addition, the same problem remains with the questions used by Doss, Marlowe, and Godwin (1995), who asked about how much money was saved during the past four weeks out of the money the participants had received during the past four weeks. With such a question alone, it may well be possible that someone claims to have saved money, purely because there was money left over at the end of the time period given.

It should be noted, that the above described problems with the wording of the questions that can be used to tap into saving behaviour are not specific to the investigation of saving in young people or children. In search for a good measure to use with children and adolescents, total savings could also be misleading for reasons not always different to those when used with adults. The amount in a bank account or piggy bank could be quite small despite representing a child's hard-won mini-fortune. This means that a small amount may be misjudged as the result of constant spending (no saving behaviour). Furthermore, without a specified time period, the total amount in a piggy bank or bank account reflects saving over a life time, while over that time, there will be periods of dissaving (spending from savings). In addition, the amount of money in a bank account or building society does not necessarily need to represent the saving behaviour of the child, because money can be put in these accounts by the child's parents, grandparents or other relatives

(Webley, Levine, & Lewis, 1991). Apart from that, there are practical reasons. Total savings is for example not a measure easy to obtain, because a child might not know the actual balance of his or her savings account or might be reluctant to reveal it. This is something that has been found with adults in survey studies. Questions about one's income and savings are sensitive questions that might result in people dropping out of a study.

Being interested in the development of saving behaviour and the psychological variables that help us understand the saving processes during adolescence, a measure is needed, that can distinguish between those who generally tend to save and those who generally tend not to save. Such a measure will be closely related to an adolescent's general money management approach. In addition, a measure is needed to estimate the likelihood with which an adolescent would choose to save as opposed to choosing saving alternatives that are appropriate for and specific to the adolescent life stage. Because saving has been found to be regarded as something that is good and one should do by very young children (Sonuga-Barke & Webley, 1993), it is possible, that when asking adolescents about their saving behaviour, they do think of saving as an appropriate answer, even if they are not saving themselves. Therefore a measure is needed that at the same time specifies how money is saved. Such a measure would also help discriminate between residual and discretionary saving.

1.4 Adult saving

The review of saving behaviour in adults will give an account of the research on the motives people have for saving, as well as the strategies people use to save. Furthermore, their attitudes towards saving as well as individual differences and the influence of psychological variables are presented.

1.4.1 Why do people save? (motives)

The motives for saving have been investigated by several researchers (Keynes, 1936; Katona, 1975; Lindqvist, 1981; Alessie, Lusardi, & Aldershof, 1997; Kotlikoff, 1988; Horioka & Watanabe, 1997).

A good list of saving motives comes from Keynes (1936), who considered what saving means to the individual. His compilation of saving motives consists of eight main factors that may cause individuals to refrain from spending: precaution, foresight, calculation, improvement, independence, enterprise, pride (which includes saving money to bequeath) and avarice. To this list, Browning and Lusardi (1996) added a ninth motive, the down-payment motive. This is the motive to accumulate money that will be used for deposits to buy houses, cars and other expensive durable goods. While Browning and Lusardi consider this list to be complete (since 1936, only the down-payment motive has been added), they refer to the fact that there is considerable heterogeneity in people's saving motives. In addition, saving motives will not stay the same for one person across a longer period of time. This is for example supported by the findings of Alessi, Lusardi, and Aldershof (1997). They found that people in the Netherlands save for different reasons that vary by age and that the differences in motives match life stages. That is, people seem to have saving motives that are appropriate for a certain life stage. The four motives they considered in their study can be described as 'house', 'unforeseen circumstances', 'child', and 'old age'. Saving for the purchase of a house was most important between the ages 20 and 30. Their data show that across all ages included, saving for old age was relatively unimportant. According to Webley, Burgoyne, Lea, and Young (2001), this could be related to the quality of the social security and pension provision in the Netherlands.

Katona (1975) noted that most of the reasons people give for saving belong to one of the following four categories: emergencies, retirement, children and family needs and for other purposes, such as to buy a house, a business, durables, or for holidays. An example for cross-cultural differences in the purposes for saving is for example the saving for durables that is more common in Germany than in the United States (Strümpel, 1975). A large proportion of families in the United States used instalment

plans for this purpose, while in Germany, a large proportion of liquid assets were allocated for durables.

Based on needs, Lindqvist (1981) proposed a hierarchical model that accounted for cash management, a buffer for unforeseen emergencies, the financial means for attaining a desired goal and wealth management. His model assumes that someone needs to manage current consumption before one is able to provide for a buffer. In other words, living expenses and bills have to be paid before one can put money aside for unforeseen circumstances. Then, once a small buffer has been built up, people can 'afford' to save money for personal goals. Only after this people are able to save to accumulate wealth or change their standard of living.

Wahlund and Wärneryd (1987) proposed a model that distinguished between four types of savers (based on people's main motives for saving): wealth managers, goal savers, buffer savers and cash managers. Because this distinction proved to be meaningful when tested with a Swedish sample, Wärneryd (1999) emphasized its potential usefulness for the development of saving stimulating incentive plans.

While 'saving for a car' can be considered a concrete goal saving motive, such a goal can be linked to the more abstract goal 'to be independent' for example. With the aim to investigate the superordinate goals of people's saving motives, Canova, Manganelli Rattazzi, and Webley (2005) used a procedure that Bagozzi and Edwards (1998) used for an investigation of goal setting and goal pursuit in the regulation of body weight. With this procedure, goals and the relationships between them are elicited. The results of their study indicate that people's reasons for saving serve superordinate goals such as autonomy (security), self-esteem and self-gratification. This shows that there is more to be learned about people's saving motives and that different saving motives are not solely dependent on socio-demographic variables. In addition, this shows that Katona (1975) was basically right about the variety of possible motives.

Kotlikoff (1988) stressed the importance of the bequest motive. This motive has been drawn on to explain why saving does not reduce during old age as would be expected from the life cycle hypothesis. Kotlikoff (1989) showed that in the United States,

almost 30 percent of family saving is precautionary. People seem to save because of anxieties about retirement and old age. They save to have a buffer.

According to many studies buffer saving or saving ‘for a rainy day’ is the most common and most important saving purpose and those who do not have a buffer seem to feel guilty about not having it (Wärneryd, 1999). Buffer saving has been found to be an important saving motive not only in Western countries but in many other countries (Alessie et al., 1997; Horioka & Watanabe, 1997). Kazarosian (1997) investigated the relationship between the precautionary saving motive and income uncertainty and found that the precautionary motive varied in size depending on occupation. He considers risk preference to play an important role in this. He found that in all occupations, self-employed people, who are considered less risk averse, responded less strongly to the precautionary motive than their more risk-averse counterparts.

Marshall (1966) suggests that people develop a saving habit when they save to control their expenditures, and that this might explain why people still economise even when economising is no longer necessary. In line with this, Wärneryd (1999) considers the control of expenditures to be the most important component of a saving habit. Saving might be the outcome of pursuing the control goal or saving might be the goal that is reached by means of controlling one’s expenditures.

1.4.2 How do people save? (strategies)

There are a number of different strategies people use to help them save. The fact that saving is difficult, and that saving requires self-control (behavioural life-cycle model, Shefrin & Thaler, 1988) means that people need to apply self-control strategies when trying to save. To describe issues that are related to self-control in the economic context, Thaler and Shefrin (1981) talk about the two-self economic man. In their proposed model, they distinguish between two roles (a ‘planner’ and a ‘doer’) that co-exist within an individual. The ‘planner’ is considered to be concerned with lifetime utility while the ‘doer’ is considered to be selfish and myopic. According to them, people use rules to alter (tempting) opportunities. In the case of saving, the planner would impose rules that restrict the doer’s spending opportunities. Thaler

and Shefrin give an example, the so-called debt ethic: a ban on borrowing. A somewhat weaker rule would be that one would allow oneself to borrow money for certain things like a house or a car. They assume that such rules are learned from parents or other role models. Therefore, they think one should be able to pick up on differences brought forward through social class, education or age. Furthermore, they think that such rules develop into habits by establishing a routine to spare the doer's decision process. This indicates that the pre-adult years might be important with regard to habit formation in the context of saving behaviour.

One of the issues considered important with regard to applied and basic research aiming to influence saving behaviour mentioned by Wärneryd (1999) were individual strategies for achieving saving. He referred to the DNB Household Survey questionnaires in which respondents were specifically asked about strategies that help avoid spending money. The questions included tactics such as 'keeping records of expenditures', 'avoiding having too much cash on hand when shopping', 'making monthly deductions of an amount for saving', and 'not using credit cards'. Wärneryd considered three groups of people who differ according to the level of control they have over expenditure: those with little control, those who have good control and those who have a tight control over their expenditures. Those with little control are considered least likely to save. It would have been interesting and valuable to learn which of the strategies used by people to avoid spending money were the most popular and most effective ones, but this was not reported.

A study by Furnham (1985) showed that age was a factor that differentiated where people saved: young people (people below the age of 30) saved their money in a bank account, while the middle-range group (between the ages 31-50) saved through a mortgage, and the oldest group in the sample (over 50) saved through insurance policies. This indicates that different saving strategies may be related to different saving motives during different stages throughout life.

Kempson, Bryson, and Rowlingson (1994) describe how low-income families make ends meet. They distinguish between three attitudes towards money: careful money management, pay-as-you-go, and saving and spending. Of the 74 families they interviewed, two thirds claimed to be careful with money. Within this group they

observed two distinct approaches. There were families who budgeted in advance and families who kept detailed accounts of their spending. Budgeters were least likely to get into difficulties with bill paying, while those who kept account of what they had spent their money on (afterwards), were doing this because they had financial difficulties. This suggests that keeping track of one's expenditures may not prevent someone from getting into trouble, while budgeting and planning ahead may do so.

For low-income families, an area where money could be saved easiest seemed spending on food. Food shopping was actually considered as the only area of flexibility after individual items had been cut out. Apparently, cutting costs by spending less on food is something that was typical for savers in the study by Lunt and Livingstone (1991) as well. Their results showed that it was the group of savers, compared to non-savers and non-savers with savings, who spent significantly less on food (and more on clothes).

One phenomenon that is described in the literature as being related to budgeting is 'mental accounting' (Shefrin & Thaler, 1988). Many consumers use a special kind of budgeting system that allows them to check on expenditures through various mental budgets (Wärneryd, 1999). A specific amount of money is then allocated (on a monthly basis or not) to a certain mental budget and by doing so, this procedure makes sure that there is always money for different expenditures. Likewise, most of the families in the Kempson, Bryson, and Rowlingson (1994) study had different sources of income and the money was allocated to different purposes.

1.4.3 How do people think about saving? (attitudes)

The investigation of people's attitudes towards saving aims at predicting saving behaviour or changes in saving behaviour. The study of attitudes towards saving has revealed that most people tend to have positive attitudes towards saving (Keynes, 1936; Katona, 1975). Many people regret having saved too little (Katona, 1975). This finding actually reduces the predictive value of attitudes for saving behaviour.

The empirical study of attitudes towards saving and their relationship with past saving, general saving behaviour and saving intentions showed associations that were

sometimes not straight forward, unhelpful for the prediction of saving behaviour or even confusing. It is difficult to say what the role of attitudes is with regard to saving behaviour. The findings from various studies reporting that attitude items did not contribute towards an explanation of saving could be due to differences in the measurement of the attitudes. For example, when Furnham (1985) investigated people's reasons for saving, their attitudes towards saving and their habits of saving money in Britain, he found five attitude-groups: pointlessness, benefits, wealth, denial and investments. Participants below the age of 30 and over 50 believed that saving was beneficial and better educated as well as the least well educated participants believed that saving would be pointless and that it was not possible to achieve wealth by saving. His study showed that people's attitudes towards saving do differ and cannot universally be considered positive. However, the items used to capture people's attitudes varied from general statements that referred to other people ('Most people who are careful savers are mean and penny pinching.') or the welfare state ('If one lives in a welfare state there is no need to save at all. '), as well as one's own saving acts (I often deny myself certain pleasures so that I can save money). Nevertheless, the results of his study showed that older people were more positive about saving and that the most and the least educated people were negative about saving (but not about investments).

According to Furnham (1985), it is possible that people infer their attitudes towards saving by self-observation. He interprets his findings in terms of Bem's (1972) self-perception theory. If older people note that they save regularly, then they might as a result of the observation of their own behaviour tend to strongly believe in the benefits of saving. Furnham also found that people could hold different attitudes towards saving in general and towards their own saving behaviour. In Furnham's study it remains unclear however whether someone thinks of saving as pointless because the tax rate is high, because living in a welfare state reduces the need to save or because someone actually is not very good at saving.

With attitude measures one can never be sure whether attitudes are causing behaviour or whether attitudes are the result of behaviour. While in some areas attitudes are thought to predispose a person to behave in an expected way, studies in the economic domain have found indication for the opposite. In the context of

attitudes to debt, Lea, Webley, and Levine (1993) have provided an example where attitudes could be the result of the behaviour in question. The debtor groups were less disapproving of debt. One reason for a change in attitudes after a change in behaviour could be that people try to reduce cognitive dissonance (Festinger, 1957). In other words, a change in attitude might be adaptive.

1.4.4 Psychological variables and individual differences

A number of psychological variables have been investigated to help understand individual differences in saving and saving behaviour in general.

Brandstätter (1993) put forward the idea that personality variables could function as moderators of the predictive validity of attitude measures. According to him, the perceived value of attitudes is increased if attitudes are treated as (partly) determined by personality. He thinks that whenever attitudes and behaviour intentions towards a specific issue are measured and people are assumed to behave according to their attitudes, personality should be taken into account. Brandstätter (1988) developed the 16PA (a short and reliable version of Cattell's 16-personality factor test 16PF, Schneewind, Schröder, & Cattell, 1983), that has been used in the DNB Household Survey research for many years. Using his personality index, he found that 'emotional stability', 'introversion' and 'conscientiousness' were related to saving (Brandstätter, 1996). He did not consider these relationships to be direct but he thought that the personality factors will influence people's saving attitudes. One of his findings was that in the model he tested, conscientiousness lost its impact when saving attitudes were included.

Nyhus and Webley (2001) found that personality factors had independent effects on different types of saving behaviour. Autonomy for example, appeared to be a significant predictor of saving in that high autonomy was associated with lower saving and an increase in the likelihood of a household being in debt. In addition, they found that agreeableness was negatively correlated with financial wealth and that introverts have more savings than extraverts. However, they did not find the relationship between saving and conscientiousness found by Brandstätter (1996) or Wärneryd (1996). Wärneryd found that financial self-control was associated with

'conscientiousness'. Using saving motives, attitudes and saving behaviour as dependent variables, he showed that saving behaviour and saving intentions were related to 'conscientiousness' and 'inflexibility'. Canova and Manganelli Rattazzi (2004) reported that in their study on 245 Italian adults, extraversion and conscientiousness had effects on saving intention. Extraversion had a direct negative effect on saving intention, while the effect of conscientiousness on saving intention was mediated by evaluative attitude.

Because saving is the result of a choice between short-term consumption goals and long-term preferences, time preference and self-control are considered to be related to saving behaviour.

Time preference reflects a person's degree of impatience to experience pleasant events or the degree to which one is willing to postpone unpleasant events. There is empirical evidence that people differ with respect to how far they think and plan ahead. Some people are more present-oriented while others are more future-oriented. Also, future-oriented people can either plan ahead for years or limit their planning to a number of weeks. Given the fact that saving means as a rule that some consumption is postponed to be available for future spending, it is not surprising that there are studies that indicate a positive relationship between time horizon and saving (Julander, 1975; Wärneryd, 1996; Nyhus, 2002). Another finding regarding people's time horizons and relationships with economic behaviour is that of Lea, Webley, and Walker (1995) and Webley and Nyhus (2001). The results of their studies on consumer debt indicated that people with debt problems have shorter time horizons than people with small debts (mild debtors) or no debts (non-debtors).

Self-control is needed to apply tactics and techniques to fight one's impatience so that a long-term preference can be lived-up to. However, many situational factors may influence the outcome of self-control. The measurement of these variables has therefore also not been straight forward as there is no evidence yet that people have a delay preference that is stable across situations. Daniel (1995) found a tendency for delayers to describe themselves as wanting to save as much as possible while non-delayers describe themselves as liking to spend all their money immediately. That is, delayers thought of themselves more in terms of being a saver, while in fact they did

not seem to save more than the non-delayers. In her study, the high delay group had higher scores on self-control, but this relationship was not significant. The investigation of the relationship between self-control, time preference and saving behaviour remains difficult. Because conscientiousness is related to traits such as 'being disciplined' (Ashton et al., 2004) part of somebody's level of self-control is probably captured by the conscientiousness measure. Self-control is however an issue that seems to be in people's mind when thinking about saving, which becomes clear from people's use of saving clubs. Such clubs limit the need for self-control, a strategy to help someone not to spend money while saving up for something.

1.5 Summary

With this first chapter it has been demonstrated what it means to investigate the saving behaviour of adults from an economic psychological perspective. In addition, it has been clarified why research on the development of saving behaviour in adolescence lends itself to this field of study. Various saving theories proposed by economists and psychologists were introduced, as well as the most important empirical studies on adult saving. Against this background, in the following chapter, the literature on children's and adolescents' saving will be presented. Where applicable, comparisons will be drawn between the economic world of children, adolescents and adults, with reference to economic socialization research and adolescent developmental psychology.

Chapter 2 - An Economic Socialization Approach to Saving in Childhood and Adolescence

2.1 Introduction

This chapter has three aims: to put adolescent saving behaviour in context, to identify gaps in our knowledge of the development of saving behaviour, and to demonstrate why the study of adolescent saving behaviour will benefit from an approach that takes the behaviour of the parents into account. To achieve this, previous literature on saving in children is reviewed, as this work -together with the work described on adult saving in Chapter 1- forms the starting point for the research presented in this thesis. The review will highlight the many ways in which the economic world of adolescents is different from the economic world of children and adults. It will explain why it is important to recognise adolescents' dependency on their parents, not only in a financial way but also psychologically. Therefore, the most important theories of adolescence and several aspects of adolescent development relevant to the study of saving are reviewed. The Chapter concludes with a section which introduces research on parenting behaviour in general and the particular role parents play in their child's and adolescent child's economic socialization with regard to saving.

This Chapter will argue that the development of saving behaviour in adolescents is an important topic within research on how people become economic agents. The focus will be on saving as part of the economic socialization of adolescents. A better understanding of the development of saving behaviour during adolescence will tie together the existing work on children's saving and adult's saving and advance theoretical development in this area.

2.2 Children's saving

“In every science one of the first steps towards understanding something is understanding its development” (Krause & Harbaugh, 1999, p. 2).

Krause and Harbaugh (1999) believe, that this also applies to economics and that we therefore, “can learn a great deal about economic behaviour of adults by studying the development of that behaviour in children” (p. 2). Transferred to the study of saving, this means, that to better understand the spending and saving patterns of adults, an examination of these patterns among children and adolescents should be fruitful.

2.2.1 Economic socialization in childhood

The general description of socialization by Brim (1966) emphasizes the content of the process of learning, by which individuals acquire the knowledge, skills and dispositions they need to participate as more or less effective members of the society.

The notion that socialization includes the learning of new social roles implies it is not restricted to the early years in life, but stretches into a lifelong process (Lutfeý & Mortimer, 2006). The life course perspective is a theoretical perspective that views individuals as moving through different stages of the life course. “Human development is embedded in the life course and historical time” (Elder, 1998, p. 9). Throughout their lives, people are constantly adapting to different socialization settings such as for example school, college, full-time work, marriage, or parenthood (Shanahan, 2000).

Economic socialization in particular is considered as “a specific concept referring to the whole process by which a child will develop an understanding of the economic world. It is related to ‘naïve economics’, the economics of nonspecialists. Even though children, as well as many adults, are ‘naïve subjects’, they are familiar with parts of the economic world and possess some knowledge and understanding of how it works. Economic socialization concerns the acquisition of the knowledge, skills, behaviours, opinions, attitudes and representations, which are relevant to the economic world. The concept refers to the maturing child who is learning how to apprehend the world of adults. Furthermore, it refers to the adult who is changing

roles and evolving through life with various economic events - such as getting his or her first job, being unemployed or retiring - since these changes will have an effect on his or her way of thinking about economy” (Roland-Lévy, 1999, p. 175).

Very early in life, children encounter money by watching their parents buy things (Lunt & Furnham, 1996). According to social learning theory, children learn by observing and imitating the most relevant models (Bandura & Walters, 1963). The name social learning theory shows that an emphasis is placed on social variables as determinants of behaviour. According to Bandura (1977), children learn new behaviours through imitating or modelling. This process is called observational learning. Children try to reproduce what they observe in their environment (Murray, 1985). Children learn by making mental notes on what they have seen, and later they will recall the mental representation to reproduce the behaviour of the social model. From this, it becomes clear that observational learning is a form of cognitive learning (Shaffer, 2001). Furthermore, the social learning theory draws on reinforcement and punishment (behaviouristic learning theory). Children are often responsible for creating the very reinforcers that strengthen new habits, which highlights their active role. That is, the environment affects the child, and the behaviour of the child is considered to affect the environment (reciprocal determinism, Bandura, 1986). The theory of social representations assumes that children’s acquisition of knowledge, including knowledge about economic concepts is a social process (Moscovici, 1984).

A different approach to economic socialization is the cognitive developmental structuralist theory of Jean-Piaget (Stacey, 1987). Burris (1981, 1983) and Jahoda (1979) for example, could demonstrate that the developmental stages found in other areas can also be observed in the child’s economic thinking. The stages in the development of economic concepts found by Burris for children aged four to 12 are based on children’s understanding of commodities, the value of a commodity, exchange, property, money, banking and work. This traditional approach is characterized by a model of deficiency. That is, the approach examines when and how children are becoming more adult like, mature and rational and it implies that in their early years, children are missing certain functions, which adults do have.

The majority of economic socialization studies adopted an adult-centred view of the child's economic world, and only domains were included which are obviously economic such as the topics of the studies by Burriss (1981, 1983). While these studies tell us what children at various ages are able to understand with regard to the economic world of adults, they do not necessarily tell us whether children are able to engage in economic behaviour themselves. In response to this adult-centred view of the child's economic world, Webley and Lea (1993) proposed that researchers should be more concerned with the real economic world of childhood. To create a better understanding of the economic world of children, the economic behaviour that matters to the children concerned should be investigated. They emphasize that the problems children face in their everyday life are meaningful to them and the main interest should be in how children understand and solve their economic problems. To investigate economic socialization, Sonuga-Barke and Webley (1993) adopt a view they call the socio-developmental approach. This approach encourages a child-centred view of economic activity and sees the child as an economic problem solver. According to them, economic behaviour is constructed within the social group. The notion that in childhood, spending and saving are social activities, which depend on negotiations with for example one's parents, has also been reported by Webley, Levine, and Lewis (1991).

The role of parents as economic socialization agents has mainly been investigated in connection with their attitudes towards the management of their child's pocket money and their child's money use (Prevey, 1945; Marshall & Magruder, 1960; Feather, 1991; Ward, Wackman, & Wartella, 1977; Furnham & Thomas, 1984b, Furnham & Kirkcaldy, 2000; Lewis & Scott, 2003). Research from France suggests that pocket money and allowances seem to play a more educative role during adolescence than during childhood (Lassarre, 1996).

A specific example of how parents can contribute to the range of their children's economic experiences is the establishment of earning opportunities for doing household chores (Warton & Goodnow, 1995). Furthermore, they could encourage their child to use money from different sources differently, which may cause their child to eventually use mental accounts³ (Webley et al., 2001). Whether parents will

³ The categorization of income and assets that affect spending decisions, see Chapter 1 (p. 19, 32)

consider implementing payment for doing household chores for example, is likely to depend on a variety of factors (Warton & Goodnow, 1995) and may also be moderated by their particular view of childhood (Goodnow, 1988).

Leiser and Ganin (1996) distinguished between two general types of parents when it comes to their socialization behaviour and socialization goals in the economic domain. First, there are parents who try to shield their children from economic worries and responsibilities. Those parents keep their children away from the talks and discussions they have about financial matters and important purchases. This approach goes along with the notion that economic matters are grown-up preoccupations and children should be free of those worries, because they are only young once. Second, there are parents who take into account educational considerations. Those parents act on the assumption that children need to be trained to be economically independent sometime in future. They consider it important that their child learns how to budget and how to save and to delay gratification and they might encourage their child to earn money so that the child can learn the 'value of money' while young.

What is known about the general role of parents as (economic) socialization agents and their particular role in their child's saving behaviour will be reviewed in more detail in the final section of this chapter, starting with paragraph 2.4.

2.2.2 Saving in childhood

Through pocket money, a fixed sum of money given on a set day (Leiser & Ganin, 1996) often received as of the age of six (Furnham, 2001; Barnett-Verzat & Wolff, 2002), children get a first chance to spend or save real money. Research on children's saving is limited but valuable information has been obtained through interviews, experiments and surveys (Baele & Vlerick, 2000; Webley, Levine, & Lewis, 1991; Sonuga-Barke & Webley, 1993; Otto, Schots, Westerman, & Webley, 2006; Doss, Marlowe, & Godwin, 1995).

For psychologists who have been mostly interested in the delay of gratification and individual inter-temporal choice when investigating saving behaviour, the early years

where children learn to wait (Maital, 1982) are of particular interest. The difference between delay of gratification and saving is that a saving-action consists of a series of individual choices to postpone some consumption that need to be integrated over time: simply waiting for a gratification does not lead to a large reward (Sonuga-Barke & Webley, 1993).

In a series of studies, Sonuga-Barke and Webley (1993) investigated children's saving behaviour in depth. The results delivered insight into the early development of saving decisions, strategies and saving beliefs. Playing a variety of ingenious economic games, children of different age groups were required to save up for a target toy. Throughout a game, they were confronted with a number of tempting opportunities where tokens could be spent. Sonuga-Barke and Webley suggest that a number of processes are involved in the development of children's saving skills. According to them, two types of understanding affect the development of saving behaviour: children need an understanding of the concept of 'temptation' (choosing between present and future consumption) and of saving strategies as an effective means to solve the temptation problem. In order to grasp the temptation problem, children also need to understand the consequences present spending has on future spending opportunities (present-spending consequences).

2.2.3 Age differences

Dickens and Ferguson (1957), Ward, Wackman, and Wartella (1977) and Furnham and Thomas (1984a) all found that saving increases with age.

At first sight, one could think that with higher incomes (or higher levels of pocket money) it is easier for older children to save more, but Furnham and Thomas (1984a) also found that older children saved for different reasons and in a different way. Older children more frequently made use of savings accounts and they seemed to anticipate a general need for money in the future, as opposed to just save for short-term consumption goals (i.e. Christmas presents).

Based on the experimental studies, Sonuga-Barke and Webley (1993) found a number of age differences with regard to children's saving and their understanding of

it. Children by age six know that saving is a good thing. They saved, but they did not like it very much. Six-year-olds saved because they thought they ought to. They have probably picked up from their parents the notion that self-control and patience are good things. Despite demonstrating that they were able to save, six-year olds were not very good at it. With regard to the use of the bank, six-year-olds were reluctant. Many of them thought that putting money in the bank is equal to spending money, so that money in the bank was perceived as money lost. This finding was also reported by Webley, Levine, and Lewis (1991). Furthermore, the economic style of the six-year-olds was characterised by little thought for long-term goals and a lack of concern for the future. This is in keeping with Furnham and Thomas' (1984a) finding that older children compared to younger children more frequently seemed to anticipate a future need for money. The saving behaviour of six-year-olds was considered to be functionless. Children of that age save because they have picked up the notion that it is socially good. In the studies by Sonuga-Barke and Webley (1993), the most significant improvements were found between the ages six and nine. Nine-year-olds used the bank as a safe place to put one's money. Both the money box and the bank are seen as a safe place because when your money is in the money box or bank, you cannot lose it. The bank however is perceived as a place that is safer than a money box. By the age of 12, when asked about what the best thing is about banks, children referred to the interest one gets. Furthermore, 12-year-olds seem to use the bank as a temptation inhibiting strategy. Money in the bank is far away and cannot easily be spent. Apart from the advantage of receiving interest, putting money in the bank is considered as a savings-aid. This shows that 12-year-olds recognise the need for self-control when saving up for something. The bank is a place where the money is safe, independent of one's ability to use self-control or fight temptation.

2.2.4 How do children save? (strategies)

The saving behaviour demonstrated by children who took part in the studies by Webley, Levine, and Lewis (1991), Sonuga-Barke and Webley (1993) and Otto, Schots, Westerman, and Webley (2006) revealed that children use a variety of saving strategies when required to save up for a target toy. Examples of such strategies are 'saving by not spending at all during the game', 'saving up until target reached and

then spending', 'spending only half', 'saving by forgetting' or 'saving (with the bank) as a temptation inhibiting strategy'. In one of the games, children could use a detour to avoid the sweet shop or the robber. In another game, children could also use a detour to avoid the robber (at two points in the game) but to use the detour children were made to pay a toll (this detour meant crossing a river). This was done to investigate children's choice between actions with social or economic value. In the first scenario (with the sweet shop and the robber), the number of times children used the detour to bypass the robber were compared to the number of times children used the detour to bypass the sweet shop. Children of all age groups bypassed the robber more often than the sweet shop. With regard to total use of detour, no effect of age was found (participants were six, nine, and 12 years old). This showed that the children (even the 12-year-olds) did not use the detour to avoid the tempting feature of the sweet shop. They might not yet have understood the difficulty posed by the sweet shop. This finding was replicated in a slightly different setting by Otto et al. (with a variation of the economic board game), when in their first study, no effect of age was found for the use of the detour (to avoid the sweet and toy shop). The 12-year-olds would use the bank because money in the bank is safe from oneself, but they did not use the detour to reduce the temptation.

In one of the studies by Sonuga-Barke and Webley (1993), children were specifically asked about their strategies for dealing with temptation. The younger children reported to distract themselves, going to another location (physically), or doing something else, while the older children (12-year-olds) reported to employ different kinds of ideational strategies, strategies that involved 'thinking'. Thus, they observed a move from rather behavioural strategies to more cognitive strategies in children between the ages six and 12.

The findings of these studies have provided us with insights about certain aspects of functional saving behaviour to occur, but from the results of the experiments we do not know yet, whether young children would behave in the same way in the real world. When trying to save up for an item that costs more than one's weekly pocket money amount, a very rigid strategy (no spending until target reached) is not easily kept up.

Empirical evidence about children's use of saving strategies in the real world is limited but some information has been provided by Furnham and Thomas (1984a). Irrespective from -and in line with- the experimental studies on children's saving, they found that older children compared to younger children, more frequently made use of savings accounts. Another strategy reported by the same authors was the safe-keeping of saved pocket money by parents. That is, children would give their savings to their parents to look after. This particular strategy was more often applied by middle-class children compared to working-class children. The potential impact of environmental factors (such as for example socio-economic class) on the economic world of children will be discussed together with the impact of those context variables on the economic world of adolescents in paragraph 2.3.1.

2.3 Adolescent saving

Adolescence is the stage of life during which people become independent agents within the economy (Webley, Burgoyne, Lea, & Young, 2001). In this respect, it is surprising that the transition from childhood to adulthood is a relatively neglected topic in economic psychology.

During adolescence, young people make a number of economic decisions, such as spending their first earnings or taking up positions in the labour market. They will establish consumption preferences and habits. This hints at the importance of this period of life also for the development of attitudes towards saving, for example, as postulated by Ölander and Seipel (1970). From this point of view, adolescence is an important period with respect to economic socialization.

2.3.1 Economic socialization in adolescence

The economic circumstances of adolescents differ to those of children in a number of ways. Some of these changes can be considered particularly meaningful for their economic socialization towards becoming an independent economic agent.

Adolescents will, for example, have more opportunities for spending than children and preadolescents⁴ and they will have larger budgets (Meyer & Anderson, 2000; Furnham & Thomas, 1984a). They will also be allowed to make more independent choices. For a range of economic activities, their autonomy and independence will increase (Inkeles, 1969; Furnham, 2001; Lassarre, 1996). This is associated with gaining independence and autonomy from one's parents and at the same time, spending more and more time with one's peers and away from home (Catherwood & Gillibrand, 2004). This shift in importance of socialization agents during adolescence is one of the key changes in the social relationships of adolescents. While parents and the family are pivotal during childhood, peer groups, teachers, and other adults will become more influential during adolescence (Inkeles, 1969). Nevertheless, despite the increasing influence of peers, parents remain strong socialising agents throughout adolescence (Youniss & Haynie, 1992). The opportunity for adolescents to earn money outside the home will impact on the variety of experiences of economic activities adolescents can engage in.

“Anne got a job in the high-school cafeteria, saved her money, and bought silk stockings, two short dresses and four flimsy pieces of underwear known as teddies” (Gilbreth & Gilbreth-Carey, 1953, p. 213).

The fact that they can independently earn money will at least in parts free them from adult economic control.

“I bought these clothes with my own money and I'm going to wear them. I'm not going to be the only one in class with long underwear and a flap in the back. It's disgusting” (Gilbreth & Gilbreth-Carey, 1953, p.214).

Campbell (1969) defines adolescence as a system of rights and duties, together with a social role, when he describes this period of the life-stage from a socialization point of view. He postulates that the adolescent socialization process should be set in a social space. During adolescence, adolescents are supposed to become less dependent on their parents and more oriented towards their peers as well as to the adult world. Furthermore, they are supposed to try out new behaviours and

⁴ Term used by Meyer and Anderson (2000) to refer to 8 to 12-year-olds inclusive.

experiment with who they are. In addition, they are supposed to be learning to be adults. According to Campbell, with regard to the socialization process, adolescence is important, because “the object of this process continues in a power-dependent and economic-dependent position, but compared to childhood, has heightened intellectual powers and information which permit articulation and explanation of the demands and expectations he encounters” (p. 856). While the reference is dated, the issues mentioned by Inkeles (1969) and Campbell (1969), are certainly not. During adolescence, young people are becoming more independent, they are struggling for autonomy and begin to identify themselves as separate entities from their parents. While they do so, they start to focus on their ability to solve their problems on their own (Steinberg & Silverberg, 1986). In an economic context, this would mean, that the adolescent should strive to gradually solve his or her economic problems independently as well.

For a better understanding and a more complete picture of economic behaviour, economic psychology takes into account the influence of the economy, the social environment and the culture. In the case of children and the specific economic behaviour of saving, important environmental influences are their parents and the saving institutions, who are trying to encourage children to save with them (Sonuga-Barke & Webley, 1993). This highlights the importance of the parents as socialization agents. Nonetheless, there is evidence that at preadolescence, the peer context is becoming increasingly important as well. Conformity motivation through choice of clothing, for example, seems to influence what children between eight and 12 purchase, how they shop and who they shop with (Meyer & Anderson, 2000). Furthermore, the influence of the media (via television viewing) as well as that of peer communication on the social motivations for consumption of adolescents was demonstrated by Churchill and Moschis (1979). At the same time however, they showed that parents are able to strongly moderate the influence of television viewing, for example. This again stresses the import of parents as socialization agents for the economic socialization of adolescents in particular.

Other environmental factors that have been looked at with regard to their relevance for the economic socialization of children and adolescents are contextual factors such

as culture, society, socioeconomic environment, family structure and socioeconomic status.

Comparisons of the results of studies conducted in Scotland (Jahoda, 1981), Hong Kong (Ng, 1983), and New Zealand (Ng, 1985) revealed that the business ethos of a society and its (high) levels of children consumer activity can have an impact on the speed with which children of that particular society acquire an understanding of the bank (Ng, 1983).

The idea that parental behaviour with regard to their child's economic socialization may be influenced by their value system has been demonstrated in a study in Australia (Feather, 1991). Giving pocket money or setting up an allowance system was either justified by group thinking (children as part of the family whose needs should be met) or by individualistic values (pocket money and allowances are thought to provide for opportunities to learn to become more independent). Another example of environmental influences on adolescents' economic socialization through values can be found in the results of the study Bowes, Flanagan, and Taylor (2001) conducted in six different countries. The responses given by adolescents about children's involvement in different types of household work and their willingness to consider payment for it seemed to reflect general differences in social and political characteristics of the countries included. Adolescents from countries with an individualist ethic (here: USA, Australia, and Sweden) were more likely to agree with some payment for certain household jobs, while adolescents from countries assumed to place more emphasis on the social group (concern for the welfare of others, here: Bulgaria, Czech Republic and Hungary) preferred no payment for these kinds of household jobs. While adolescents are influenced by their immediate social environment (their family), they will also be influenced by the cultural context⁵ in which they grow up. For a summary of cross-cultural differences regarding the economic socialization of children, see Leiser, Sévon, and Levy (1990).

Further evidence for the influence of context variables can be found in the study by Mortimer, Dennehy, Lee, and Finch (1994), who investigated the effects of social background variables on allowance arrangements in the USA. While family income,

⁵ The macrosystem, Bronfenbrenner, 1979, see paragraph 2.3.2.

for example, had significant positive effects on the likelihood of receiving an allowance in the first place, family income was not related to the amount received. Furthermore, they found that parental education was related to receiving an allowance. According to them, it could be possible that better educated parents set up an allowance system to foster independence and responsibility in their child.

Family structure is another context variable that seems to play a role in economic socialization as shown by Mortimer et al. (1994) and Barnet-Verzat and Wolff (2002). Mortimer et al. found that children of non-traditional families were more likely to receive pocket money than children from traditional families. In line with this, Barnet-Verzat and Wolff found that children in single or divorced households were more likely to receive pocket money, but they also found that they were more likely to receive higher amounts. Further evidence for higher amounts of money given to adolescents in single-parent families comes from the Netherlands by Kooreman (2007). These differences however, were not found in the study by Doss, Marlowe and Godwin (1995).

The demographic variable socio-economic class has been included by a number of researchers (Marshall & Magruder, 1960; Newson & Newson, 1976; Furnham & Thomas, 1984a, 1984b; Lewis & Scott, 2000, 2003) leading to inconclusive results. Newson and Newson for example, found that based on a sample of 700 children in Britain (seven-year-olds), working-class children more often received money irregularly and also received more money in total. At the same time, the children from working-class parents saved less than the children from middle-class parents. From this, one could presume, that the amount of money received from parents is not related to saving. The relationship between socio-economic status and the amount of money received from parents was for example also inverse when Marshall and Magruder (1960) compared seven- and eight-year-olds. However, for the older children in their sample, this was not the case. Furnham and Thomas (1984a) studied age, sex and class differences in the distribution and use of pocket money by children between the ages seven and 12. The only significant class differences they could find were not as expected and were related to doing work around the house as well as letting parents look after the money they had saved. So, they did not find differences in amounts received or saved. However, the way in which they measured class

differences was not very detailed (too crude, according to them), as they only differentiated between two classes. It should be noted however, that with children of the age group they worked with, the measurement of social class can be difficult. In a recent study with teenagers, 30 percent of them did not know what the education level of their parents was (Kooreman, 2007). Another explanation they considered was that class differences might, as suggested by Stacey (1982) become more relevant and visible when children grow older. According to Stacey, it could be possible that children, who don't belong to very rich or very poor families, might not yet be strongly affected by their family's socioeconomic status or economic background. He thought it possible that the influence of those background variables will be more pronounced during adolescence than during childhood. The relationship of social class and economic knowledge of adolescents demonstrated by Lewis and Scott (2000) would keep up with this. With another study (2003), the same researchers established that social class and parents' occupation (professional) seem to be related to a number of economic activities parents informally engage in with their adolescent child. A study that investigated the links between socio-economic background and young people's saving behaviour was conducted by Pritchard, Myers, and Cassidy (1989), who found that students from families with a high socioeconomic background and parents with higher educational levels reported higher levels of savings. At the same time, family income was not related to student saving.

Finally, more recently, the influence of a number of socio-economic variables on young people's disposable income has systematically been tested for in the UK by West, Sweeting, Young, and Robins (2006) and in Finland by Lintonen, Wilska, Koivusilta, and Konu (2007). West et al. (2006) illustrate very neatly the complexity of the financial transactions between parents and children in families. Clearly, young people's disposable income is relevant for the study of adolescent saving, and therefore, the findings of the social distribution of the sources and the amounts of adolescents' personal income as captured in their study are briefly summarized here. For socio-economic status, they relied on status measures provided by parents and children. Social class was derived from information about parental occupation (household income was not available), deprivation was based on information about residential postcode and family structure was included to distinguish between two-

parent families, step families and single-parent families. Furthermore, they took parental working status into account as well as means tested benefits (to distinguish between levels of poverty). From their detailed approach of the potential impact of social class and socio economic status on young people's disposable income, West and his colleagues report no significant differences between classes at any age in the percentage of pocket money or other money received. This was however not the case, when income from external work was included. Then, the findings for mean income revealed a remarkably consistent inverse relationship with social class, statistically significant at each age under study. Up to age 15, differences related to family structure were consistent with Mortimer, Dennehy, Lee, and Finch's (1994) and Barnet-Verzat and Wolff's (2002) earlier findings. Adolescents from single-parent households had higher incomes than adolescents from two-parent households. The same was true for parents' working status of adolescents below the age of 15. Adolescents from families with both parents working received the smallest amount of money. At age 15, there were no significant relationships between personal income, family structure or parents' working status. This could mean that socio-economic background does not become more evident during adolescence as suggested by Stacey (1982), but rather that the impact of it flattens out.

From the results of some of the studies reviewed above, one could imagine that parents' education or occupation may play a role for their child's level of economic knowledge or their money management behaviour. This has been investigated in more detail by Furnham and Thomas (1984b) using a sample of adults. The differences they found were related to giving pocket money in general (middle-class adults were more in favour of giving pocket money than working-class adults), the onset of giving pocket money (middle-class adults were in favour of starting earlier than working-class adults) and how often it should be given (middle-class parents considered weekly more often than working-class parents).

While the investigation of socio-economic background variables has revealed interesting differences, the results are not always consistent and what is more important, have not told us yet *how* a parents' level of education for example may influence the economic socialization process of the child. As considered by Lewis and Scott (2003), there are certain economic activities parents can engage in with

their children, which might be related to the encouragement of saving and delayed gratification. All studies described above are correlational and socio-economic background variables were investigated usually with regard to just one variable of interest. Apart from having provided for valuable insights, the results provide a patchy picture with a lot of scope for speculations about potential underlying influences (for example different values). It remains unclear what the primary determinants of parents' pocket money attitudes are (Furnham, 2001) and more importantly, how this may be related to the money management behaviour of their children.

The attempts that have been made to differentiate between parents' attitudes and behaviours with regard to pocket money management demonstrate an understanding of the importance of parents as socialization agents with regard to economic socialization. Overall, the studies have looked at rather specific practices that might for example be related to parental value systems. However, a more general approach towards the behaviour of parents as a context variable for socialization (Darling & Steinberg, 1993) might deepen our understanding of 'emerging economic agents' more profoundly. Treating economic socialization as integral part of general socialization calls for a combination of perspectives from economic socialization theory as well as adolescent developmental psychology theory. That is, to better understand the development of saving behaviour during adolescence, it is important to look at the psychology of adolescent development as well.

2.3.2 Theories of adolescence

As a field of study, the psychology of adolescent development goes back to the beginning of the twentieth century. Before describing the key theories of adolescence, it should be noted that applying the term theory in a narrow scientific way would reduce the number of theories drastically. Furthermore, one also needs to accept that some of the theories of adolescence are not limited to this particular period in life and some are used to describe a separate aspect of a phenomenon central to adolescence. The review of the theories comprises a selection that mirrors their development and modification through history.

The first theory that explicitly concerned the development during adolescence is based on a nativist view of development. This bio-genetic approach taken by Hall (1904) considers adolescence as a period in life that concerns evolutionary changes typical of this particular life-stage (Lerner & Steinberg, 2004). According to this approach, development is interpreted as growth and maturation, based on physiological factors and that the direction of development is universal and independent of for example the socio-cultural environment (Oerter & Montada, 2008). Hall's theory defines adolescence as a specific period within ontogenesis, that is marked as a period of storm and stress. This upheaval would be universal and inevitable. While Hall's approach was criticised and rejected on empirical grounds and for methodological reasons (Lerner, 2002), there exist examples of approaches that considered adolescence as a universal developmental disturbance, with a biological basis (for example Anna Freud, 1969). Another example is Erikson (1950, 1959), who viewed adolescence as a period of life in which psychological crises of identity are the result of an inherited maturational ground plan (Lerner & Steinberg, 2004).

Contrasting these nature-based approaches, nurture-oriented ideas were proposed by for example McCandless (1961, 1970), whose theory contains social learning and drive-reduction aspects (Oerter & Montada, 2008). According to him, during adolescence, the individual learns that certain behaviour effectuates a drive-reduction while other behaviour doesn't. His theory is concerned with sex differences in identity development, a process linked to societal expectations.

Another theory that contributes to our understanding of adolescence is the social learning theory (or social cognitive theory) of Albert Bandura (1977, as introduced in paragraph 2.2.1). According to Bandura, children and adolescents are trying to reproduce what they observe in their environment. In addition, social learning theory stresses that people and their environments are reciprocal determinants of each other.

Piaget's developmental theory of cognition (1960, 1969, 1970, 1972) is an example of a theory concerned with a specific aspect of development during adolescence as opposed to adolescence at large. The emergence of formal logical structures (Inhelder & Piaget, 1958) is based on an integration of nature and nurture.

Adolescents are assumed to be able to use cognitive operations, that is, they are not fooled by appearances any more (Shaffer, 2001). As of the age of 11, adolescents' cognitive operations are reorganised in such a way that permits them to think about thinking (metacognition). The thinking of adolescents is not limited to the concrete and observable any more. Rather, they are capable of systematic, deductive reasoning which allows them to consider a number of solutions to a problem.

Primarily nurture oriented was the work by Margaret Mead (1958) for example, who emphasized the cultural determinants of behaviour. Using this conceptual lens, she proposed a theoretical concept for identity development during adolescence. She emphasized that differences in the character of men and women are socially created differences, which also depend on the identification with biologically given differences. Mead was primarily concerned with the way "innate abilities and capacities develop within specific cultures at specific periods in specific environments" (1978, p. 364).

The body of research that followed these theories was according to McCandless (1970) and Petersen (1988) concerned with descriptions rather than explanations of patterns of covariation among pubertal timing, personal adjustment, and adolescents' relationships with peers and parents (Lerner & Steinberg, 2004). Lerner and Steinberg note that this research consisted of studies on behavioural and psychological processes, that happened to use adolescent subjects and studies that described particular groups of adolescents, such as for example delinquents. From this, the study of individual-context relations among diverse groups of youth emerged, with the aim to reveal basic developmental processes and to apply the findings to promote positive youth development (Lerner, 2002). The period of adolescence was considered a natural ontogenetic laboratory for studying life-span development. Theories emerged, that considered the person and the environment as an interactive system (Lerner & Steinberg, 2004). The notion that development at any point throughout life involves relations between individuals and multilayered ecologies forms the basis of Bronfenbrenner's ecological model (1979).

Bronfenbrenner's ecological model of development incorporates the interacting and interrelated factors of the ever-changing social and cultural environment to which

children and adolescents adjust. His model takes the characteristics of a person and the different 'layers' of the social environmental context into account. 'In ecological research, the principal main effects are likely to be interactions' (Bronfenbrenner, 1977, p. 518). According to Bronfenbrenner, there are four different ecological environments. First, there is the microsystem which includes the home and the family. Later the playground, the school and the peer group are included. A person can be part of more than one microsystem. The mesosystem contains the interacting microsystems, such as the school and the family, the family and the friends, the family and the neighbourhood, etc. Bronfenbrenner refers to the exosystem as the structure of the larger community in which the adolescent lives and finally, there is the macrosystem that includes general cultural, political, social, legal, religious, educational and economic values. In developmental research, the macrosystem is generally captured through (and limited to) social labels such as class, ethnic groups, or urban versus rural.

Bronfenbrenner's model has had a remarkable impact on the developmental research agenda through the inclusion of the ecological field and the interaction effects of variables such as biological, psychological, social, cultural and economic conditions (Muuss, 1996). This interaction can also be described in terms of how the micro-, meso-, and macrosystems interact. Furthermore, Bronfenbrenner stresses that children also shape their environment through their own behaviour (1994). The notion that individuals play an active part in shaping their environment has received a lot of attention. Also Lerner's developmental contextualism (1998) emphasizes that the dynamic interactions and reciprocal relationships between the person and the context always exist and shape development. Lerner's developmental contextualism is influenced by Bronfenbrenner's ecological model and not limited to adolescence, but a life-span developmental theory. This means, it involves the study of changes over the entire life-span of individuals. According to Lerner, "organism and context are always embedded each in the other" (1986, p. 59) and the developing persons play an active role in their own development. The interplay of individual agency and the macrosystem is complex (Larson & Wilson, 2004). Adolescents are not passive recipients of change, rather, they do respond to change and at the same time influence their environment and they often do this in collaboration with their families, peers, as well as others (Brandstädter & Lerner, 1999; Elder, 1998).

Adolescents for example select their friends (Kerr, Stattin, Biesecker, & Ferrer-Wreder, 2003; Mewse, Eiser, Slater, & Lea, 2004), schools, environments and romantic partners (Elder & O'Rand, 1995; Lerner & Walls, 1999). One of the mechanisms in the transition to adulthood described by Shanahan (2000) is agency. Adolescents are planful as can be seen from their long-term goals, for which they strive (Shanahan & Elder, 2002). Larson and Wilson emphasize the fact that adolescents are not acting always alone but that their agency can also be exercised by their parents. Furthermore, the choices made by adolescents are influenced by their parents, teachers and friends. An example of the social interaction and mutual ongoing flow of influence between the parent and the adolescent (bidirectionality) is given by Collins, Gleason, and Sesma (1997). While on the one hand parents are likely to train their adolescent child towards more mature behaviour, on the other hand, through their (responsible) behaviour, adolescents will affect the degree to which the parent is granting independence (Collins, Gleason, & Sesma, 1997). The importance of the influence of the behaviour of adolescents (or children) on the parent-child relationship or the behaviour of the parents towards their (adolescent) child, known as child effects, has been emphasized by Bell (1968). Bell considerably contributed to an understanding of the parent-child relationship as being a constant reciprocal adaptation to each other's behaviour (Schaffer, 1999). Shanahan uses the term bounded agency, because people are constrained by societal circumstances (Shanahan, 2000). In most Western countries, the opportunities for young adolescents to earn money outside the home are for example restricted.

In contemporary developmental science, the focus is on developmental systems theories (Damon & Lerner, 2008). These theories emphasize that it is essential to consider the physical and social ecology within which human development occurs (Elder & Shanahan, 2006; Bronfenbrenner & Morris, 2006) and help scientists to understand the mutually influential relationships between the variables that are involved in human development. According to Cairns and Cairns (2006), it is not sufficient or appropriate to pertain to one discipline (for example biology or psychology) or level of analysis, in order to explain the diverse ways in which human development takes place. That is, in the past three decades, interest has increased in how variables from any one level of organization affect and are affected by variables

from other levels (Brandstädter, 2006; Bronfenbrenner & Morris, 2006; Gottlieb, Wahlsten, & Lickliter, 2006).

The review of the theories of human development reveals three prevailing trends. First, there has, in recent theories, been a shift from unidirectional to bidirectional conceptions of the relationship between parents and children. In other words, children are now seen as active agents who are influenced by and at the same time influence others. Furthermore, the fact that development is a life-long process has gradually been more appreciated (with a concern for inter-individual variability and plasticity). And for another, the importance of the context (at different levels) for human development has increasingly been recognised.

2.3.3 The psychology of adolescent development

Several aspects of adolescent development have been selected for discussion because of their relevance for adolescent saving.

The adolescent period of life

The term adolescence is used for the period in life between childhood and adulthood (Moshman, 2005). An adolescent is not a child anymore and not yet an adult. The timing of adolescence is not clear-cut, but its onset is easier to observe than its end. Children between the ages 10 and 13 undergo a variety of changes. Physical changes for example are associated with puberty, and intellectually, they become more competent. The changes in their social development are reflected in a gradually increasing orientation towards their peers (Seiffge-Krenke, 2007). In modern society, the move from elementary to secondary school marks a change in education. The beginning of adolescence could be seen as related to a biological change (the median age of menarche in Western countries), while the end of adolescence is less clearly defined and probably more related to a social change or a number of social changes (Arnett, 2000). The end of adolescence goes along with the onset of adulthood and common adult roles (Arias & Hernández, 2007). In the past years, a delayed onset of the transition from adolescence to adulthood has been observed in ‘cultures that

allow young people a prolonged period of independent role exploration during the late teens and twenties' (Arnett, 2000, p.469). This new developmental period is supposed to be different from adolescence, in demographic terms and for example with regard to identity exploration. With the term emerging adult, Arnett refers to young people between the ages 18 and 25. From this, one could argue that adolescence may be the time between 13 and 18. Steinberg (1993) distinguished three phases of adolescence: early (11-14), middle (15-17) and late (18-21) adolescence, and the Society for Research on Adolescence for example, construes adolescence as the entire second decade of life (11-19). This shows that adolescence is a period of transition related to the development and maturation of young people and that the end of adolescence seems related to the accomplishment of certain developmental tasks. Defining the end of adolescence remains difficult however, because the timing of the achievement of milestones such as completing one's education, beginning a steady job or getting married can vary greatly among individuals in Western societies (Moshman, 2005). In addition, the application of psychological criteria for defining the end of adolescence is problematic, because adolescents may demonstrate levels of rationality, morality or identity that some older individuals never achieve. Arnett (2000) proposes to define adolescence as the period between 10 and 18. According to him, this period is rather normative, in the sense that young people of that age can be expected to experience physical changes of puberty, to live at home and to be part of a school-based peer culture. For the research described in this thesis, the term adolescence will be used to refer to young people between the ages 11 and 18. This period comprises the two phases 'early' and 'middle' adolescence, as distinguished by Steinberg (1993). Most adolescents between 11 and 18 will have some experience in making their own spending decisions and a large part will be able to spend money they have earned themselves. As noted by Arnett (2000), adolescents below the age of 18 can be expected to live at home. This means that it is very likely that they have some kind of allowance, pocket money and/ or earnings while at the same time, they are not responsible yet for their living expenses such as rent or bills.

Developmental tasks

During the transition from childhood to adulthood, adolescents face the entrance into production and reproduction fields of the society and culture they are living in (Nurmi, 2004). Becoming an economically independent individual can be seen as central to the entrance into production, which includes decisions about schooling, education and career. Building up intimate relations, founding a family and taking care of children can be seen as central to the entrance of the reproduction domain.

For the transition to adulthood, Havighurst (1972) proposed eight developmental tasks young people are supposed to achieve during adolescence. Havighurst considered development as a learning process, which includes an active learner who is interacting with an active social environment (Oerter & Montada, 2008). The developmental tasks he considered relevant for the period of adolescence include: acceptance of one's body, adoption of a masculine or feminine social role, achievement of emotional independence from one's parents, development of close relationships with peers of the same and opposite gender, preparation for an occupation, and preparation for marriage and family life.

Another example of markers for the transition from childhood to adulthood, are the primary and secondary changes identified by Hill (1980). Physical changes, more complicated social role definitions and cognitive changes are considered to be the primary changes. The first of the secondary changes concerns the changing family relationships. Adolescents struggle to maintain a certain balance between attachment and independence. The second change is considered with the adolescents' increasing autonomy. Adolescents are becoming more autonomous, they become increasingly able to make independent decisions, and they also become more self-reliant as well as responsible. The third change is related to sexuality, requiring the transformation of social roles and that affections for parents are modified. The fourth change regards intimacy and the fifth change is to do with the definition of the self (identity transformation). Finally, adolescent development includes changes in achievement and ambition; personal goals are becoming more realistic and future-oriented. From these six secondary changes, three may have links with saving behaviour during adolescence: the struggle between attachment and independence; the increase in

autonomy and self-reliance; as well as the shift from being rather present oriented towards being more oriented towards the future.

Autonomy, independence and self-reliance

Achieving a healthy sense of autonomy is one of the most important tasks that adolescents face (Shaffer, 2001). What it means to become 'independent' has been defined by Douvan and Adelson (1966). Although Douvan and Adelson differentiated between emotional, behavioural, and value autonomy 40 years ago, Collins and Steinberg (2008) still consider their distinction as a useful starting point for the discussion of the developing sense of independence during adolescence. The term value autonomy refers to moral development or the development of an independent world view. Emotional autonomy refers to the adolescents' subjective feeling of independence, particularly in relation to one's parents. The last broad type of autonomy, behavioural autonomy, is used to refer to the ability to independently make decisions and the attainment of self-governance and self-reliance. Behavioural autonomy can be considered the most relevant type of autonomy for the study of the development of adolescent saving (as an independent way of dealing with an income constraint problem). For the construct of behavioural independence in research on adolescence, Hill and Holmbeck (1986) point out two different forms. First, there is the adolescents' capacity for competent self-governance without external guidance or monitoring through parents. Second, there is the adolescents' capacity to function independently when faced with external influence, such as for example peer pressure. Important for both situations is the adolescents' level of self-reliance. For the most part, research on the development of behavioural autonomy has been guided by social learning theory (Hill & Holmbeck, 1986; Collins & Steinberg, 2008). Within this research, first and foremost the focus has been on the study of the development of responsibility and the adolescents' resistance to peer pressure (Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Steinberg & Silverberg, 1986). Four different ways in which parents can facilitate the development of behavioural autonomy have been described by Collins and Steinberg (2008). Parents can for example function as good decision making models. In the family context, they can also encourage independent decision making or reward independent decision making when this has taken place outside the family context. Finally, they can help their adolescent child to develop a

more general sense of self-efficacy through the use of parenting that is characterized by both responsiveness and demandingness (Darling & Steinberg, 1993).

Adolescents' autonomy and independence are viewed as the development of a self-regulatory process (Hill, 1987). Autonomy used to be defined and operationalized as separation from the parents (Beyers, Goossens, Vansant, & Moors, 2003). This definition highlights a perceived distance between the adolescent and the parent. More extreme is the term detachment, for the drive towards separation and independence, which is assumed to emerge at the onset of adolescence. In that sense, autonomy can be considered to be the opposite of connectedness to one's parents. However, autonomy has also been defined as self-governance or agency (Ryan, 1993). Assuming that individuation in adolescence implies the change from a close relationship with one's parents during early adolescence to a relationship where there is a balance between connectedness and agency or self-governance, Beyers et al. (2003) suggest that an increase in separation during early adolescence may serve as a stepping stone towards a healthy form of autonomy. They propose that separation could be a measure typical of the process of autonomy development. According to them, the outcome of this developmental process is better reflected by agency. During the quest for autonomy, the parent-adolescent relationship is renegotiated (Shaffer, 2001). According to Collins (1995), it is possible that conflicts between the parent and the adolescent show the parent that the adolescents' needs and expectations have changed, and that a renegotiation of the parent-adolescent relationship may be necessary. There is evidence that between adolescents and their parents, most everyday conflict is concerned with (pocket) money matters as well as doing chores (Barber, 1994; Waters & Kennedy, 1993; Fang & Dong, 1998). Ellis-Schwabe and Thornburg (1986) found that male adolescents considered spending money an area of common conflict with their mothers and fathers, while female adolescents reported that spending money was a major conflict only with their fathers. Conflict with their mothers had more to do with home responsibilities, selecting clothes or dating.

Orientation towards the future and self-efficacy

Another fundamental aspect of development during adolescence is a change in time perspective (Lewin, 1951; Hill 1980). While children have learned to distinguish between fantasies, dreams, wishes on the one side and reality on the other (Samuels & Taylor, 1994), the adolescent is assumed to develop an understanding of the past and to adopt a new outlook on the future (Muuss, 1996). This aspect of development is important also for the development of functional saving behaviour. The young child mainly lives in the present. For the adolescent, the future becomes more meaningful and life goals are developed (Shanahan, 2000).

One of the first modern psychologists to highlight the importance of the ability to imagine the future for human motivation and goal setting was Lewin (1935). According to Lewin, time perspective is an orientation towards future goals. Furthermore, he considers that someone's ability to take into account the consequences of one's behaviour is the result of developmental processes. According to Gjesme (1996), future time orientation is a stable characteristic that comprises "a general capacity to anticipate, shed light on, and structure the future" (p. 211) on the one hand and the degree to which individuals engage in future-oriented cognitions on the other hand. Gjesme (1979) states that in childhood, someone's temporal perspective develops slowly. He distinguishes three individual factors he assumes to influence the development of an individual's future time orientation: motives, the ability to delay gratification, and the ability to use symbols to conceptualize the future. However, in discussing empirical research regarding the proposed relationships between these factors and future time orientation, he admitted that the relationships are not straight forward. Nonetheless, interesting for the study of saving and its relationship to future time perspective are the findings by Klineberg (1967) and Lessing (1968), who both demonstrated a positive association between future time perspective and a greater willingness to defer gratification. Klineberg also found that with cognitive maturation, the length of someone's future orientation increased. Another study with similar results is the research by Greene (1986), who investigated future-time perspective in adolescence and found that older students showed greater future extension (and students who were more cognitively advanced were better able to project a set of events into the distant future). In a recent study, Steinberg et al. (2009) simultaneously investigated age differences in future orientation and delay

discounting. With their large scale study (935 participants between the ages 10 and 30), they found that adolescents compared to adults were less oriented towards the future. This finding was robust across the use of several indices. In addition, the age differences did not vary by gender or ethnicity. Furthermore, they found different patterns of age differences when looking at planning ahead versus temporal orientation, the anticipation of future consequences, and delay discounting. With regard to planning ahead, age differences were observed well into early adulthood. With regard to future orientation, age differences were not seen beyond middle adolescence. Furthermore, they found that females compared to males scored higher on planning, time perspective, and anticipation of future consequences. In addition, scores on time perspective and anticipation of future consequences (but not scores on planning ahead) were not associated with IQ. With regard to age differences in delay discounting, they found that adolescents aged 13 and younger will accept smaller rewards than individuals aged 16 and older, to obtain the reward sooner. Furthermore, they found that age differences in delay discounting were significantly mediated by differences in future orientation as opposed to differences in impulsivity. This finding is interesting with regard to saving because it emphasizes the importance of an individual's future orientation independently of impulsivity or self-control when asked to choose between a smaller reward now and a larger reward later.

Bembenutti and Karabenick (2004) reviewed the association between delay of gratification, future time perspective, and self-regulated learning. In this context, they refer to self-efficacy as being an important determinant of (academic) motivation and performance. Bandura (1994) defines self-efficacy as someone's confidence (or lack of confidence) in the ability to do something or to learn something that is new. Self-efficacy is therefore considered to be potentially relevant for the study of the development of saving behaviour of adolescents. People will not set goals unless they think they have the ability to reach these goals, in other words, confidence is important for the formation of goals (Bandura). When saving is regarded as a skill, confidence will be important for the formation of saving goals. If I don't think I can do it, I will not plan to do it. Social learning theory distinguishes between the acquisition of potential response patterns and the actual performance. That is, through observation, certain behaviours are learned and stored as information

in the memory and depending on the social conditions and situations, the behaviour will also be performed. This applies to the development of saving behaviour in that sense that children have plenty of opportunities to observe their parents using money, and if parents also save money, children might take notice of this too. Besides self-efficacy beliefs, a concept that has been considered to be associated with future time perspective in the context of student motivation is perceived instrumentality (Husman & Lens, 1999). When the individual realizes that the current endeavour is instrumental or helpful to achieving a valued goal, this is referred to as perceived instrumentality.

Adolescent thinking

Thinking processes, such as social cognition and problem-solving skills are examples of cognitive development taking place during adolescence (Compas, Hinden, & Gerhardt, 1995).

The notion that adolescent thinking is different from thinking in childhood began within the context of Piaget's stage theory. The final stage that Inhelder and Piaget (1958) proposed is the stage of formal operations. According to Inhelder and Piaget, adolescents become able to think about their own thinking and to reason at the level of propositions. The ability to think about one's own thoughts (metacognition or executive control) can be considered a hallmark of cognitive development in the second decade of life (Kuhn & Franklin, 2008). However, it is not possible to pinpoint the emergence of metacognition to a narrow window of months or years in late childhood or early adolescence (or indeed any time). In addition, while adolescents have been found to do better than children on tasks that have been designed to assess reasoning capabilities and second-order operations (Keating, 1980, 2004), the formal operational stage structure does not seem to abruptly manifest itself.

In recent years, researchers interested in cognitive development have become to stronger appreciate the role of context in the development of adolescent thinking (Keating & Sasse, 1996; Keating, 2004).

“In general terms, it seems likely that the route by which culture and context influence cognition and consciousness during the critical adolescent transition will typically be interpersonal and relational, through varying agencies (family, peers, teachers, media, etc.)” (Keating, 2004, p.76).

In the context of children’s and young people’s level of economic understanding, the influence of the environment has been demonstrated by studies (Jahoda, 1981; Ng, 1983) that investigated children’s understanding of the bank as a profit-making enterprise. The differences in level of understanding seemed to be related to the children’s level of participation in economic activities. Ng (1983) interpreted this with the possibility that socio-economic understanding could in parts be influenced through socio-economic reality shaping. In this respect it should be noted that children’s economic understanding of their own economic behaviour, in the economic world that they construct themselves (such as for example marble games markets in the ‘playground economy’) is likely to be far more sophisticated than children’s understanding of how adult markets work (Webley & Lea, 1993; Webley, 2005).

Besides the recognition of the importance of context, the influence of emotions and social relationships on cognitive development throughout the life-span has been recognized. In their discussion of adolescence as a critical period for the development of a critical habit of mind, Keating and Sasse (1996) distinguish between conceptual flexibility (divergent thinking, analogical thinking, applying algorithms), reflective thinking (formal logic, informal reasoning, skepticism), and cognitive self-regulation (comprehension monitoring, curiosity). Of those aspects, the development of cognitive self-regulation can be considered most relevant for the study of the development of saving behaviour during adolescence, since “the conflict between ‘having now’ versus ‘having later’ requires the person to engage in self-regulation” (Faber & Vohs, 2004, p. 509). Keating (1990) refers to metacognition (the ability to monitor one’s own cognitive activity) as a luxury only available to experts, since only “once a difficult skill or domain has been mastered, attention can be given to whether or not the system is operating smoothly” (Keating, 1990, p. 76). Keating (1990) considers a number of cognitive achievements as key achievements specific to the adolescent period of life. First, he notes that during adolescence, it is

possible to observe an increase in automaticity of basic processes, which frees cognitive resources for other concerns. In addition, adolescents demonstrate a far greater breadth of content knowledge across various domains. Furthermore, they seem to have an increased ability to maintain different representations of knowledge simultaneously, which permits new combinations of that knowledge. Moreover, the adolescents' spontaneous use of cognitive strategies and procedures seems to increase. In a saving context, this achievement could be reflected in the adolescents' use of cognitive strategies to deal with temptation, for example, as has been documented by Sonuga-Barke and Webley (1993, see paragraph 2.2.4). The final key cognitive achievement may be the adolescents' appreciation of the relativity and uncertainty of knowledge in general. Keating and Sasse (1996) view these achievements as significant contributors to an enhanced capacity for critical thinking. Furthermore, in looking for aspects that distinguish adolescent thought from concrete operational thinking of middle-childhood, Keating (1980) notes that adolescents are able to: think about possibilities that are not immediately available, think ahead and plan, think-through hypotheses, think about thought (metacognition or second-order thinking), and think beyond conventional limits. From those aspects, the thinking ahead and planning ability seems relevant to the study of the development of saving during adolescence, as well as the capacity to think about possibilities that are not immediately available.

2.3.4 Saving in adolescence

The economic world of adolescents is different to that of adults and children in many ways. The first distinction can be made in terms of their income. Children often receive pocket money, birthday money and holiday money (Webley & Plaisier, 1998) while adults earn money. Adolescents have got the opportunity to have both, pocket money and earnings (be it from doing chores or working out of school hours).

A second distinction can be made in terms of financial responsibilities. Just like children, adolescents are not responsible for their living costs. They don't have to pay rent or bills or pay back mortgages. With an allowance however, parents do sometimes expect their adolescent child to buy certain necessities themselves.

A third distinction can be made in terms of financial freedom. While adults can do what they want with their money (in principle), adolescents are likely to be given some guidelines or rules on what they should not spend their money on. In addition, they are not fully contractually capable yet. For example, without a parent, a 13-year-old cannot buy cigarettes or a mobile phone with a contract and in most countries the legal age to buy alcohol is at least 16. Adolescents as opposed to children can however be expected to have more financial freedom.

A fourth distinction can be made with regard to financial opportunities. Again, adolescents have more spending opportunities than children (they start going out in evenings and into town with their friends). However, compared to the economic world of grown-ups, their spending opportunities are still fairly restricted.

A final difference regards financial skills and experiences. Due to the limited opportunities, young people can be expected to be less skilled and experienced than adults and more skilled and experienced than children.

While the Absolute Income Hypothesis (Keynes, 1936, see Chapter 1, paragraph 1.3.1) applies to adults who pay for their rent (or mortgage rates) and bills, one can imagine that it can be generalised to younger people too. During adolescence, living expenses are normally met by parents. In addition, children and young people often get given money ‘when they need it’ (daily extras, Lassarre, 1996). Pocket money or allowances are widely considered ‘spending money’ by parents (Sonuga-Barke & Webley, 1993) and usually given without strings attached. This means that by nature and in principle, adolescents should be able to save.

In addition, Duesenberry’s Relative Income Hypothesis (1949, see Chapter 1, paragraph 1.3.1) seems relevant during adolescence. Adolescents have a variety of opportunities to observe the consumption levels of their peers and relevant others (friends). Duesenberry’s theory implies that an adolescents’ consumption level might change independently from a pocket money raise, because of a change in the consumption level of relevant others one might want to keep up with. The same can happen the other way around: one might experience a raise in income and not instantly change one’s consumption level.

One important difference between adult and adolescent saving behaviour is that adolescents are not (as mentioned before) responsible for their living expenses, which means that their spending is hardly constrained by fixed costs like rent or bills. Having a lower level of economic responsibility specific to the adolescent life stage might be an advantage when investigating psychological variables that have been used in the study of saving. This does not mean that socio-economic variables are likely to be less important during adolescence, but how important the relative income is for saving during adolescence has not been investigated yet.

What Katona (1975) referred to as ‘residual saving’ can be found in young people for example as a result of a lack of spending opportunities (i.e. throughout the week) or when they experience an increase in income and are not (yet) used to the amount and the new buying power that comes along with it. What Katona labelled ‘contractual saving’ can be found in young people when they decide to use one of their parents to help them save up for something through leaving part of their pocket money with them for a certain period of time (i.e. before Christmas to save up for presents). Such an agreement does not require a new decision during the period of time the parent and child have agreed upon and therefore facilitates saving. What Katona referred to as ‘discretionary saving’ is exactly the type of saving, young people and children can engage in by accumulating some of their money (of which the majority could in fact be considered discretionary income) either at home or with a bank. The purchase of stocks or shares that is considered as a saving act by adults is assumed not to be relevant for adolescents.

2.3.5 Why do adolescents save? (motives)

The saving motives adolescents consider important to them are likely to differ from those relevant to adults. The precautionary saving motive for example, the motive considered most important to adults, might not at all be important to adolescents, because adolescents who live at home with parents who ‘are there’ in case something unexpected happens, can be assumed not to need their own buffer. They do have their parents as a buffer in the background and it is therefore assumed that they might not save ‘for a rainy day’. This does not mean that adolescents are not able to save

for a buffer, something that has been demonstrated in a study by Otto, Schots, Westerman, and Webley (2006). In their study, 36 boys played an economic game that was designed in such a way as to show whether children from six to eight years and 10 to 11 years are able to buffer save. The results showed that 10- and 11-year-olds were able to do so. This however does not mean that young people do engage in buffer saving in real life. The experimental set up was designed to elicit and reward buffer saving but whether young people do feel the need to provide and save up for a buffer remains unclear. On the other hand, however, some of the motives identified by Keynes (1936) might be relevant to young people. Although during adolescence, young people become more and more independent, they are still financially dependent on their parents. Nevertheless, an adolescent could start saving up to be able to act more independently (i.e. to buy things a parent considers unnecessary or tasteless). Therefore, the motive 'independence' as identified by Keynes might be important during the adolescent life stage. To date, the motives young people have for saving money have not yet been investigated systematically. The only study addressing the saving motives of children was conducted in Sweden (Jundin, 1988). The study was exploratory, based on interviews and provides the first empirical evidence of three different saving motives relevant to young people. An example of a question used is "Do you know what you want to do with the money that you save?" (S. Jundin, personal communication, February 12, 2003). Results suggested that between the age of 13 and 18, the most important saving motive was related to short-term consumption goals. A response given by about 20 percent of all children was 'I save so as to have money when I move from home'. This indicates that a small group considered saving for the future, a motive also identified by Keynes (foresight). A response given by about 30 percent of the children in Jundin's study was 'Saving gives a feeling of security'. Whether this response reflects a precautionary saving motive rather than a cash management motive (by saving you feel secure and in control of your finances) remains unclear. Considering the hierarchical order of saving motives identified by Lindqvist (1981), the first motive of cash management might be more relevant for young people than the precautionary saving motive. To investigate the saving behaviour of adolescents, young people's reasons for saving should be taken into account and studied more in depth. The ideas mentioned above seem plausible, but there is no evidence as yet.

2.3.6 How do adolescents save? (strategies)

Thinking of the development of saving habits as an important precursor for adult saving behaviour, adolescents' use of saving strategies and strategies to control expenditure can be considered important. Habits and attitudes might be closely linked. Habits are the result of routines that are learned through positive experiences. Habits are assumed to have predictive power (Wärneryd, 1999). Such assumptions are based on the idea that people tend to behave in new situations the way they behaved in situations that were similar. Ajzen (1991) asserted that past behaviour is the best predictor of future behaviour. However, past experiences are not a good guide for behaviour when someone finds himself in a completely new situation. In addition, for coping with a new financial situation, someone's attitudes might be inadequate. Since the economic problems a child is faced with are different from the economic problems an adolescent is faced with, the strategies that might be most effective to solve these problems are likely to be different too. In the studies by Sonuga-Barke and Webley (1993) for example, the very young children kept their tokens in the purse so that they could see them (and not think they were lost), while the older children put their tokens in the money box or bank. They used the bank to help them forget about the money, which would help them save. In these games, the child's target was to buy a chosen toy with the tokens saved. If the number of tokens saved were perceived by the children as being equal to the reward itself, one could compare this result with what Mischel and Mischel (1983) found in their study of children's knowledge of self-control strategies. The youngest children in their study preferred to have the rewards exposed rather than covered during the delay period, a strategy that makes delay more difficult for children at this age. The older children were able to create a better environment for effective self-control by covering the reward.

To the author's knowledge, the only non-experimental study that reported on older children compared to younger children saving in a different way is the study by Furnham and Thomas (1984a). However, from their study we only learn that the difference in saving behaviour between the older and younger participants of the study was that the older children frequently used the bank to save. This means, that, in fact, we do not know that much about how young people do save in practice. Do

they put a regular sum of money each week into their savings account? This would correspond to contractual saving. Or do they put all the money into their savings account that is left at the end of a month? This would reflect residual saving. Or do they put part of their money into their savings account, so that they don't spend it when out in town with friends? In order to find out whether the early years are really that important for adult saving behaviour, we should start looking at how young people find out which strategies work for them. Only with a more detailed knowledge about adolescents' saving trials (and errors) it is possible to help them at the right time with the right support to be successful at saving. Also, an understanding of the development of saving strategies during adolescence may ultimately tell us something about the use of saving strategies and saving behaviour of adults.

To be successful at saving someone needs willpower and self-control. In addition to a person's intention to perform a particular behaviour, Ajzen (1991) considers perceived behavioural control to be useful to take into account as well. This seems an important addition. In order for a young person to use a specific saving strategy, that person needs to think that he or she can actually live up to it. Mischel and Mischel (1983) explored children's own strategies for dealing with a delay-of-gratification situation and for self-control in everyday life situations. Their results suggest a clear developmental progression in children's knowledge and understanding of effective delay strategies. The older children recognized which environment would make it easier for them to pursue with the delay task.

Knowing what strategies adolescents use to help them keep up with a savings plan, would help us better understand how important self-control and self-knowledge is for being successful at saving or for planning to save. If I think I am actually not very good at controlling expenditure purely by self-control and willpower, I might do things that will reduce the need for willpower and self-control (i.e. join a Christmas club). What are the Christmas club alternatives young people might use to alter their spending opportunities? Children could leave a regular amount of their pocket money with their parents or decide to have transferred part of their pocket money directly into their savings account and the other part to be handed out as cash. Thaler and Shefrin (1981) think that the family is the most likely place for rules and norms

necessary to overcome self-control problems to be learned (or not learned). According to them, the young behave impatiently partly because they have yet to master the techniques of self-control.

What strategies children and young people use in real life to stop themselves from spending money on tempting things while saving up for a short-term or long-term consumption has not been investigated yet. This would however be an important piece of the picture, considering that saving habits might be learned early in life.

2.3.7 How do adolescents think about saving? (attitudes)

The saving attitudes of young people between the ages 16 and 21 have been investigated by Furnham and Goletto-Tankel (2002) in a study that was designed to investigate young people's understanding of savings, pensions and life assurance. The attitude items they used were concerned with someone's saving behaviour, moral notions, insecurity, unease, and worries. A large number of the used items have also something in common with items that tap into saving motives. Furthermore, the 34 items included a mix of statements that tap into a general attitude towards saving and statements that tap into one's attitude towards one's own saving behaviour. The four factors found underlying these attitude items were labelled: 'saving behaviour', 'saving ethic', 'confusion and anxiety', and 'negative inhibition'. Two regressions were run to estimate whether knowledge about saving (i.e. interest rates, etc.) predicts someone's attitudes towards saving. For the regressions, the two attitude measures with the highest variance were selected. These were: 'saving behaviour' and 'saving ethic'. With total money saved, age, education, knowledge of life assurance and knowledge of pension, the two saving attitude variables could best be predicted but the regressions accounted for only ten percent of the variance. This suggests that factors other than the ones measured may be important. In their study, as in others, it was conceivable that attitudes determine one's understanding and not the other way around. Being optimistic and interested, a young person might be more likely to take the trouble to learn more about savings schemes via banks, pensions and life insurance than someone less confident.

Saving is a skill that children and young people learn from a young age. Ölander and Seipel (1970) assume that attitudes towards saving are deeply rooted and connected with upbringing and life style. But how saving attitudes develop or change during adolescence (be it as a result of one's behaviour or not) remains unclear to date. We only know that with age, people become more positive about saving and we do know that children as young as six do think of saving as something that is good too, something they should do.

What adolescents think about saving in general and about their saving in particular has not been given attention yet. Knowledge of how young people perceive, evaluate and feel about saving, the formation and potential change of their attitudes towards saving will further our understanding of the development of saving behaviour.

2.3.8 Psychological variables and individual differences

The study by Webley and Nyhus (2006) is the first that has looked at adolescents' and young adults' saving behaviour in relation to the psychological variables of future orientation and conscientiousness. Using Dutch panel data, they explored the relationship between spending, smoking, conscientiousness, future orientation, bank saving and income. Future orientation was, as reported by Strathman, Gleicher, Boninger, and Edwards (1994) with adults, associated with conscientiousness. Future orientation as well as conscientiousness were associated with bank saving. This shows that for young adults, the same psychological variables are related to saving behaviour as for adults.

One finding by Jundin (1988) was that for 11-year-olds the peer group is gaining in importance and children with many friends had a more negative attitude towards saving than children with relatively few friends. This finding could indicate that children, who are more outgoing and extravert tend to save less than children, who are more introvert by nature. However, this is only speculation since this has not been tested empirically.

In sum, we do know little about the origins of individual differences in saving and about possible relationships between psychological variables relevant to saving in adults and adolescent money management or saving behaviour in general.

2.4 Saving in the social context of the family

People often refer to their parents when they are asked who they learned their money management skills from (Kempson, Bryson, & Rowlingson, 1994). However, to date, in economic socialization research, the role of parents has been investigated mostly in terms of how they manage pocket money or what their motives for giving an allowance are (Furnham, 2001; Furnham & Kirkcaldy, 2000). In the following, the family will be introduced as the immediate social environment for general psychological development during adolescence. Subsequently, the family will be looked at more specifically as context for saving behaviour in childhood and adolescence.

2.4.1 The family as context in developmental psychology

“The family offers the best illustrations of the inseparability of a person and his or her context” (Magnusson & Stattin, 2006, p. 425).

Among the various contexts in which adolescent development takes place, the family has received considerable interest (Steinberg & Morris, 2001). This is because the family is central among the many social agencies (Shaffer, 2001; Grusec & Davidov, 2007).

“Parents provide the social context within which child behaviours have some of their most important meanings” (Bates & Pettit, 2007, p. 153).

The family is a social system and according to Le Vine (1974) parents have three basic goals for their children. First, a survival goal, which includes that parents promote physical survival and health of the child. Second, an economic goal, which

includes that parents foster the skills and behaviours the child will need for independent economic functioning as an adult. Third, a self-actualization goal, which includes that the parent promotes behavioural capabilities for maximizing cultural values such as morality, religion, achievement, or a sense of personal satisfaction. LeVine (1974) considers these goals to be in a hierarchical order. Survival comes first, followed by parents' encouragement of characteristics that are necessary for economic self-sufficiency. Only when those two are established, parents will encourage the child to seek status and self-fulfillment.

Families differ according to their structure, size, climate⁶ and decision making, quality and level of supervision, and socio-economic variables. Parents differ with regard to how they behave in their role as parents, when they raise their child, that is, they differ with regard to their parenting behaviour (Lerner, Ree Noh, & Wilson, 1998). The influence of parental behaviour on the development of competence in childhood and adolescence has been investigated in depth by Baumrind (1967, 1971). She provided a first description of parental authority patterns (1971). Later, she published a study on parental disciplinary patterns in relation to social competence in children (Baumrind, 1978). The parenting styles identified and refined by her and others (Maccoby & Martin, 1983) were subsequently used as a starting point by many researchers interested in parental behaviour and its influence on the development of children (Kurdek, Fine, & Sinclair, 1995; Nijhof & Engels, 2007; Fletcher, Darling, Steinberg, & Dornbusch, 1995). Most studies demonstrated a differential impact of these styles when looking at children's and young people's academic performance, psychosocial maturity and ability to delay gratification (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Steinberg, Elmen & Mounts, 1989; Mauro & Harris, 2000).

The styles differ with regard to their level of parental control, strictness, level of parental warmth, acceptance and involvement and were labelled authoritarian, authoritative, permissive, and neglectful (Baumrind, 1971, 1991).

The authoritarian style is an approach to parenting that is based on control. Authoritarian parents believe that it is important to be firm with children. They

⁶ The emotional climate in the family.

expect unquestioned obedience and keep children in subordinate roles. Rules will have to be followed, without an explanation why. This means that there is little room for discussion. Verbal give-and-take between children and parents is not encouraged. Authoritarian parents restrict the child's expression of autonomy (Baumrind, 1978). In addition, they are also not very likely to show physical affection to their children. While it is likely that they have high expectations about behaviour and achievement, they are unlikely to encourage or motivate their children.

The authoritative style encompasses high levels of parental demandingness as well as high levels of parental responsiveness. Authoritative parents are both restrictive and warm. They are supportive while setting and establishing rules that are appropriate for the age of their child and they acknowledge a certain amount of autonomy of their child. Many researchers have empirically demonstrated that the authoritative style has beneficial effects for the child's development. Some of the characteristics that are fostered by authoritative parenting are self-regulatory skills, achievement motivation, pro-social behaviour, cheerfulness, and social confidence (Maccoby & Martin, 1983; Steinberg, Lamborn, Dornbusch, & Darling, 1992; Purdie, Carroll, & Roche, 2004; Steinberg, 2001). Steinberg (2001) points out that during adolescence, there is one additional dimension added to the basic elements of authoritativeness: 'the extent to which parents encourage and permit the adolescent to develop his or her own opinions and beliefs' (p.8). He calls this dimension 'psychological autonomy granting'.

The permissive style, sometimes also referred to as the indulgent style, is characterised by nurturance, warmth and support coupled with low levels of parental control. Baumrind (1967) found that permissive parents were non-controlling, non-demanding but child-centred and relatively warm. Their children were the least self-reliant, explorative or self-controlled. Although Baumrind's styles were derived from research with young children (early and middle childhood), many researchers have used her classification to explain variations in a wide variety of behavioural outcomes of adolescents and young people (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Steinberg, Elmen, & Mounts, 1989; Pratt, Danso, Arnold, Norris, & Filyer, 2001).

The neglectful style is regarded as the style where parents are described as being fairly uninvolved. Their restrictiveness is limited as well as their warmth and support. Parental attention and guidance is not seen as necessary and children are considered having few rights or responsibilities. Neglectful parents do not support or encourage their child's self-regulation. Often, they also fail to monitor or supervise their child's behaviour (Maccoby & Martin, 1983).

As one might expect, mothers and fathers can differ in the style they apply. While Aunola, Stattin, and Nurmi (2000) found that the authoritarian style was more typical of fathers than of mothers, Litovsky and Dusek (1985) discovered that mothers are generally more authoritative than fathers.

Looking at the family in terms of a social system implies that one acknowledges the effects and influences among the family members. This approach is also known as a systemic approach. Parents affect their children, who affect each parent and the relationship of the parents (Belsky, 1981). In other words, every person and every relationship within the family has an influence on every other person and relationship within the family system. Therefore, the explanatory power of the construct of parenting styles (Baumrind, 1991) should not be attributed to parents alone but to the diverse interactions of both parties (Collins & Madsen, 2003). This bidirectional conception of the relationship between parents and children has been introduced in paragraph 2.3.2.

While the issue of genetic effects has so far only been touched upon in paragraph 2.3.2 (i.e. nature based theories of development, p. 53), it should be noted that in present-day socialization research, the focus has been on the interplay between inherited and experiential components of individual development (Collins, Maccoby, Steinberg, Hetherington & Bornstein, 2000). The major problem in disentangling the effect of genes and the environment is according to Plomin (1990) that the two influences are correlated. That is, the characteristics of children that affect the social interactions with others may be genetically influenced. Research conducted to investigate gene-environment effects (as well as the bidirectionality of social interaction) include studies that look for child characteristics in relation to the effect of parenting or other environmental conditions (Bornstein, 2006; Kochanska, 1997;

O'Connor, Deater-Deckard, Fulker, Rutter & Plomin, 1998; Clark, Kochanska & Ready, 2000; Flouri, 2004, 2008; Dick et al., 2007). O'Connor et al. (1998) for instance examined the role of children's behavioural problems in accounting for genetic influences on negative parenting. Their results indicated an effect of the child on the parent. Kochanska (1997) found that maternal child rearing techniques had a different effect on children who were temperamentally different (i.e. more bold versus more fearful children). With her study designed to investigate the role of child characteristics (i.e. child's self-esteem, child's emotional and behavioural problems) in predicting mothers' and fathers' involvement, Flouri (2004) provided evidence for a significant relationship between child characteristics and child-reported parental involvement. However, because her study was cross-sectional, it did not permit inferences about the direction of the effects that this relationship might have reflected. To demonstrate the direction of effects, longitudinal or experimental studies are needed (Collins et al., 2000). Twin and adoption studies are suited to investigate the strength of genetic effects (Maccoby, 2000). With a genetically informative twin-family design, Dick et al. (2007) studied the role of parental monitoring on the smoking behaviour of adolescents. Their results showed that with regard to adolescent smoking, genetic influences were of greater importance when combined with low levels of parental monitoring. Another study that underscores the important influence of a certain parenting style (in this case the authoritative parenting style) and parental disapproval of smoking (along with friends' smoking) on the smoking behaviour of adolescents is the research conducted by Mewse, Eiser, Slater, and Lea (2004). An advantage of their approach was the consideration of the conjoint influence of the family and the peer group.

At large, it is important to recognize that there are a number of studies that indicate child-to-parent effects (for a review see Bell & Chapman, 1986) or bidirectional effects (Lytton, 1990, 2000), when interpreting findings from parenting research.

2.4.2 The family as context for saving in childhood

Children are financially dependent on their parents. For very young children, pocket money is their only source of income. A large majority of the parents that were interviewed in one of the studies by Sonuga-Barke and Webley (1993) considered

pocket money as spending money. Children are given pocket money so that they can buy some sweets or toys independently without having to keep asking their parents. On the one hand, with regular pocket money, children gain independence, and on the other hand, regular pocket money can also facilitate a smoother running of the parent-child relationship (when it serves to avoid disputes). The reasons for implementing pocket money or allowances have also been investigated by Furnham and Kirkcaldy (2000) and others (Barnet-Verzat & Wolff, 2002; Baele & Vlerick, 2000). Furnham and Kirkcaldy investigated parental beliefs and behaviours with respect to pocket money and allowances in Germany. There seemed to be consensus on giving pocket money to children over five on a regular weekly basis. In addition, pocket money should not be dependent on household chores. Also, the Flemish mothers who took part in the interview study by Baele and Vlerick indicated that pocket money should be spent not saved and be given so that children become acquainted with the use of money. However, pocket money should not be spent on candy. So while pocket money is widely considered spending money, parents do have certain things in their mind pocket money should not be spent on.

Parents differ with regard to how much they generally control and supervise their child (Barber, 1996). It is possible that differences in the parents' parenting style result in differences of their pocket money management style. Lassarre (1996) found that the best allocation strategy lies in giving allowances paired with discussion of the family budget. Parental involvement in, and commitment to an allowance system appears to be vital, if it is to affect money beliefs and money management behaviour of children (Pliner, Freedman, Abramovitch, & Drake, 1996).

In the interview study by Sonuga-Barke and Webley (1993), parents reported that putting money towards a saved sum to help their child save was one practice they used to instil good saving habits in their child. Such a saving-bonus seems a good idea. However, the parents also reported that children did not often make use of this savings aid. Another finding of this interview study was that many parents do open savings accounts for their children. While they did not particularly encourage saving behaviour they did save on behalf of their child.

With regard to the parent-child relationship and the child's saving behaviour, an essential finding of the studies by Sonuga-Barke and Webley (1993) was that despite the children's attempts to save up tokens properly by themselves during the economic games, in some occasions children also tried to manipulate the experimenter to make up for the difference between the amount they had saved and the amount they needed to buy their target toy. Attempts like this showed that in real life, apart from saving up for a short-term consumption goal, children have alternatives at hand that might be as effective if not more effective and efficient than saving. Children can be expected to develop a number of techniques for getting more money out of their parents. What this shows us is that saving behaviour should not be investigated in isolation but that the context in which it occurs should be taken into account. While for very young children getting more money out of a parent might be the most likely saving alternative, for adolescents, there will be a range of additional options.

2.4.3 The family as context for saving in adolescence

In line with the dichotomy described by Leiser and Ganin (1996, see paragraph 2.2.1) is the classification into educators and regulators (or protectors) made by Furnham (1993). Educators are in favour of exposing the child to all aspects of the economic world, while protectionists are against advertising to children and try to protect the child where possible. Protectionists favour regulation (and run the risk of underestimating their child's ability and understanding), while educators believe that parents are better consumer educators of their children than schools or businesses are (Gunter & Furnham, 1998).

It is possible that an educator-parent is more likely to encourage saving behaviour in their child while a protectionist-parent is more likely to think saving is for adults. This is something that has not been investigated yet. However, when parents' influence on children's saving has been investigated in one of the studies by Sonuga-Barke and Webley (1993) it was found that through pocket money parents do provide for learning opportunities, but they do so in the area of spending rather than in the area of saving. What is surprising here is that one would expect parents who have

their child taking part in a study about saving more likely to try and provide learning opportunities not only for spending but also for saving.

The first study that looked at the impact parents have on their children's (adolescents and young adults) approach to economic behaviour in the context of saving was the study by Webley and Nyhus (2006). They found out that in those families where there were good relationships, children tend to be future oriented. In addition, father's conscientiousness was associated with the conscientiousness of the child and parents' future orientation was associated with the child's future orientation. Had a child saved money in a savings account the amount saved was related to the saving behaviour of the parents, as well as the economic socialization of the parents, to father's conscientiousness, and household income. Discussing their results, Webley and Nyhus (2006) mention the possibility that some variables related to saving (i.e. conscientiousness) might be inherited. They highlight the possibility that children's approaches to economic behaviour could be partly inherited because of inherited personality traits (Plomin, DeFries, McClearn, & Rutter, 1997) and partly the result of upbringing. Upbringing is widely investigated through measures that capture the general parenting style of a parent as perceived by the child.

One possibility to investigate the role of parents in the development of their adolescent child's saving behaviour is to examine their role in the development of certain skills a child needs to acquire in order to be successful at saving. A skill related to saving for example is someone's ability to delay gratification. Mischel (1961) has demonstrated that children of Trinidadian Indians with absent fathers show a preference for immediate rewards. In addition, Mauro and Harris (2000) demonstrated that four-year-olds who were not good at delaying gratification were raised by mothers whose child rearing style could be described as permissive. These studies show that the behaviour of parents can influence children's ability to save or children's ability to be successful at saving indirectly by fostering behaviour that enables saving success. Another example is future time perspective. Trommsdorff (1983) has considered that perceived parenting behaviour can impact on future orientation because parents who are loving and supportive and consistent in their socialization practices induce a general expectancy of a positive world, trust in others, belief in own abilities, and general optimism in their children (Davis &

Phares, 1969; MacDonald, 1971; Mischel, 1974). Pulkkinen (1990) has looked at the relationship between adolescent future orientation and home atmosphere and more recently, Seginer, Vermulst, and Shoyer (2004) investigated the indirect link between perceived parenting and adolescent future orientation. A perceived parenting style that was described as autonomous-accepting was linked to future orientation via self-evaluation.

Examples of the impact of perceived parenting style on delay of gratification as well as future orientation suggest that an investigation of perceived parenting style in relation to adolescents' saving behaviour could further our understanding of the role parents play in the economic socialization of their adolescent child.

The examination of general parenting styles and money-specific behaviours as reported by both parents and their children has been suggested by Furnham (2001) and the studies by Webley, Levine, and Lewis (1991), as well as Sonuga-Barke and Webley (1993) showed clearly that children's saving cannot be investigated in isolation but that the family environment and the child's social and economic relationships need to be taken into account. Following this line of thought, it is surprising that parenting style has not yet been investigated in relation to children's and young people's saving behaviour, but that the studies on the influence of parents have been rather descriptive.

2.5 Outline of the thesis

Several conclusions can be drawn from the literature reviewed in the first two chapters.

Our knowledge of what is going on during the years frequently described as the important years for the formation of habits and attitudes and for the development of important money management skills and saving behaviour is surprisingly limited. Considering the insightful research on children's saving and the contributions made by economists and psychologists who studied the saving behaviour of adults, it becomes clear that there remains a gap with regard to the second decade of life. The

importance of the social environment in which economic behaviour takes place as well as the importance of the social context of the family for economic socialization are recognized and will be taken into account.

The aim of this thesis is to build links between our understanding of children's saving and the saving behaviour of adults. To achieve this, saving during adolescence will be investigated within the context of the family.

The present research will provide information about the development of saving behaviour during the second decade of life and at the same time further our understanding of saving theories across the life-span. The research will start with an estimation of the relative importance of saving as a means of getting hold of larger sums of money during adolescence (Study 1). Before studying the saving behaviour of adolescents, it is vital to know whether saving presents a meaningful option to them for dealing with an income constraint problem. The idea that adolescents might feel less driven to save because they can rely on their parents or because trying to save out of the small income available at the age of 15 would be irrational (given that a 15-year-old could earn more money in less time) has not been put to the test yet.

Once the importance of saving during adolescence has been established, further studies will address the questions why young people save (motives) and how they do it (strategies). Special attention will be given to disposable income as well as psychological variables that proved to play a role in the prediction of saving in adults (i.e. attitudes, time perspective, conscientiousness, reference group). The integration of the family context will be addressed in two steps. First, the adolescents' perception of his or her parent's parenting style will be considered and the impact of perceived parenting on the saving behaviour of the adolescents will be explored. Second, the perspective of the parent and parents' practices to stimulate and encourage saving behaviour in their child will be taken into account. Before it is possible to propose a model of adolescent saving in the social context of the family, it is necessary to identify which economic and psychological variables are the most important factors for predicting saving during adolescence. Therefore, Study 2 and Study 3 will be used to establish the importance of socio-economic variables, psychological variables and perceived parenting style for understanding adolescent

saving. The final study (Study 4) will integrate the findings from the preceding studies to test a model that depicts the saving behaviour of adolescents in the social context of the family.

In short, the thesis sets out to: (i) investigate the importance of saving as one way of dealing with an income constraint problem in light of saving alternatives, (ii) establish which socio-economic, behavioural, psychological and attitudinal variables best predict saving during adolescence, (iii) put adolescents' saving behaviour in the family context, and (iv) develop a model that captures the influences and relationships between perceived parenting style, parents' practices to encourage saving, their attitudes towards their adolescent child's saving, as well as the their own saving behaviour, and the saving behaviour of their offspring.

Chapter 3 - Methodology

3.1 Introduction

This thesis sets out to examine the development of saving behaviour during adolescence and the key issue considered in this chapter is *how* this should be done. Saving behaviour will not be studied in isolation, but saving alternatives will be taken into consideration as well as the social context of the adolescents' family. This means that links will be built between our understanding of children's saving and adults' saving. It is appropriate at the outset therefore to consider how previous researchers have tackled these two domains.

For the study of children's saving behaviour, researchers have made use of experiments or interviews, as well as questionnaires (Webley, Levine, & Lewis, 1991; Abramovitch, Freedman, & Pliner, 1991; Sonuga-Barke & Webley, 1993; Baele & Vlerick, 2000; Otto, Schots, Westerman, & Webley, 2006; Fiates, Amboni, & Teixeira, 2008). Within this research, the role that parents play in the saving behaviour of their children has been acknowledged and therefore, parents have also been interviewed or given questionnaires designed specifically for them (Sonuga-Barke & Webley, 1993; Otto et al., 2006).

Research on adult saving behaviour has also made use of experiments and interviews (Ballinger, Palumbo, & Wilcox, 2003; Schröder & McKinnon, 2007) but the vast majority is based on survey and panel studies (Browning & Lusardi, 1996). In those studies, the unit of analysis has generally been the household and not the individual. Taking the household as the unit of analysis is a simplification, because individual differences are not taken into account. Furthermore, partners can be assumed to use a number of tactics to influence each other, when it comes to economic decision making in the home (Kirchler, 1995). For their investigation of savings and investment decisions within private households, Meier, Kirchler, and Hubert (1999) looked at partnership role attitudes, marital satisfaction, financial resources, and expertise, in order to find out what determines spouse's dominance. They further

distinguished between four types of decision making in couples: husband-dominated, wife-dominated, joint decisions, and autonomic decisions. This demonstrates that household decision making is rather complex. Furthermore, different money management systems in couple-households (Pahl, 1995) add to the complexity. On the other hand, just looking at the individual is a simplification as well, because incomes for example are frequently pooled (Burgoyne, Reibstein, Edmunds, & Dolman, 2007). The choice of the unit of analysis in the context of economic decision making is not an easy one. Ideally, one would have accurate information from all individuals in the household and at the same time also know about the processes by which family decisions are made.

For the study of adolescent saving behaviour, it is sensible to start with the individual; the adolescent as the unit of analysis, because primarily, the focus will be on the adolescent and how the adolescent solves income constraint problems. In addition, despite certain legal restrictions on their spending behaviour (no cigarettes or alcohol before the age of 16), and despite the influence of their parents with regard to items they might consider 'no-go-items', adolescents are assumed to be the ones who decide the amount of money they save or spend from their pocket money, allowance or earned income. This bears upon the fact that pocket money is widely considered spending money (Sonuga-Barke & Webley, 1993). There may be the odd adolescent who has to save a certain amount of the money received from parents, but they will be an exception. Once a clearer picture has emerged of how important saving during adolescence is and for what reasons adolescents might consider saving, the role of parents will be investigated with a mother-father-adolescent triad. In so doing, the variables obtained from the parents will be considered as context variables in the adolescent environment. This means that when parents' pocket money practices as well as a selection of psychological variables of the parents are taken into account, the focus will still be on the behaviour of the adolescent. In other words, the adolescent will remain the unit of analysis.

3.2 Research approaches to socialization

Three approaches are widely used to obtain evidence about socialization processes or ways in which other people such as parents, teachers, siblings or peers, influence the social development of the child (Miller, 1998).

The first approach is the use of laboratory studies. With such studies, an experimental analogue to the real-life socialization experiences of children is created. Through laboratory studies, it is for example possible to investigate whether children will imitate the behaviour of a social model. In other words, cause-and-effect relations can be studied systematically. The fact that it is possible to manipulate a wide range of potentially important independent variables is one of the advantages of an experimental approach. It is however never possible to exactly duplicate the complexities of the natural environment and the demonstration of a particular behaviour in an experimental setting will not tell us whether this behaviour will also be displayed in real life. In other words, experiments tell us what can or could happen, but not what does happen.

‘Naturalistic observation’ is the second approach that can be used to study socialization outcomes. With observation studies, attempts are made to measure naturally occurring socialization experiences. They aim at establishing cause-and-effect relation between a particular experience and a particular outcome. Although time-consuming, it might be possible to assess certain money use skills of adolescents (i.e. their spending behaviour) through observation. However, for an in-depth investigation of their saving behaviour, the naturalistic observation approach is not suitable since saving implies that a decision has been made that money is not spent (during a certain period of time). It is obvious that the observation of the absence of spending is problematic. In general, only a limited range of behaviours is sufficiently public to be studied through direct observation.

The third approach to the investigation of socialization processes is the use of verbal report or rating measures of socialization practices. This includes asking parents about their own behaviour or asking children about the behaviour of their parents. Depending on the age of the child, such a report may also be obtained in writing (through the use of questionnaires) as opposed to verbally (through interviews).

An example of the use of the naturalistic observation approach in combination with parental reports is the research by Baumrind (1967, 1971), who identified the parenting styles that were described in Chapter 2. Although initially Baumrind's typology was developed with parents of preschoolers, the styles could subsequently also be confirmed through adolescents' reports of their parents' child rearing practices.

An important limitation of research with parents in experimental settings or observational studies is that the results tell us what children and parents do when they know that they are being watched. Furthermore, observational and experimental measures are limited to the situations or behaviours they encompass, while verbal reports can be used to gather evidence regarding a wide range of socialization practices. Yet with verbal-report studies of child-rearing, accuracy is a major issue (Miller, 1998). Parents may for example present themselves in a better way. In this context, Miller uses the term 'prideful subject' behaviour. In addition, a number of researchers have found only moderate correlations between parents' reports of their socialization practices and the direct observations of parental behaviour (Winsler & Wallace, 2002; McCabe & Marshall, 2006).

3.3 The chosen research approach to adolescent saving behaviour

To investigate economic socialization, researchers have used a variety of methods and techniques. Based on semi-structured interviews, Lassarre and Roland-Lévy (1989), for example, have investigated children's understanding of abstract concepts such as insurance and employment, using pictures of situations. To investigate children's concepts of economic value, Burris (1981) used objects he presented to children, who would then be asked to explain which of the two would cost more and why. Furthermore, interviews have been linked to observation (Willis, 1977), and children have been involved as co-researchers (Webley & Webley, 1990). The choice of an approach depends on the research question and the age of the children involved. While children may have difficulties filling out a questionnaire on their own, adolescents can be expected to read well enough and be able to work silently on

a survey that is designed for them (i.e. with appropriate wording) and that, for example, does not take longer than a coursework school test.

At the outset of this thesis a cross-sectional survey study will be used to investigate the likelihood with which adolescents between the ages 11 and 18 choose to save as opposed to alternative ways of getting larger sums of money. This choice has been made for a number of reasons. Cross-sectional surveys are suitable to investigate the frequency with which a certain population performs a particular behaviour (Reis & Judd, 2000). That is, with careful sampling, cross-sectional surveys can be used to investigate the frequency with which adolescents choose to save. This means that through the use of surveys with students from various age groups, an initial picture can be obtained of how important saving in general is during adolescence. For such an investigation a large sample will be an advantage. Large samples are an important characteristic of survey studies when compared to research that involves intensive interviews, experiments, or observational studies (Miller, 1998; Oppenheim, 1992). Another advantage of surveys compared to experiments is that surveys enable the investigation of saving behaviour (without real observations) as performed by adolescents in their everyday life (given that the participants are willing to provide accurate information). When children demonstrate their saving skills through 'success' (or 'no-success') in an economic game, their skills rather than their actual saving behaviour in real life are captured (Webley, Levine, & Lewis, 1991; Sonuga-Barke & Webley, 1993; Otto et al., 2006). This means that with experiments, it is possible to show children's capabilities but not their real life performance (Miller, 1998). Furthermore, through the use of surveys, it is possible to produce a representative distribution, or cross-section, of the population one is interested in. The cross-sectional survey design is also simple in that sense that the participants are approached only once (Fife-Schaw, 2000). The use of surveys allows for comparisons between age-groups or other subgroups, such as males versus females or savers versus non-savers. Another advantage of a cross-sectional design is the short time in which data can be collected and results can be obtained. As a starting point, the first study will help identify the significance of saving during the second decade of life and will be used to answer a number of broad questions from which the remaining studies will flow. All the features of the cross-sectional survey design

mentioned above show that for the first study, this approach is by far and away the most appropriate.

Self-report inventories are well-suited to investigate psychological characteristics (Hammond, 2000) as well as people's attitudes and beliefs (Reis & Judd, 2000). This is based on the assumption that asking people directly is the best way of finding out about an individual. As a result, a large number of self-report questionnaires designed to measure dispositions and attitudes do exist. As described in Chapter 1, a number of psychological variables have been investigated in relation to adult saving, which means that established personality trait measures have been used in questionnaires (Brandstätter, 1996). In addition, for research on saving carried out with adults, a number of saving-related measures already exist. With appropriate and sensitive adjustments, these measures form a valuable starting point for research with younger people. Consequently, in order to investigate adolescents' saving motives and attitudes, as well as potential relationships between selected variables and saving during adolescence, the use of self-report questionnaires can once more be considered most appropriate. The choice of method for the second study is driven by the research questions that will be addressed.

In order to investigate the influence of parenting style on important child variables, a number of researchers have successfully relied on measures obtained from children and adolescents (Finkenauer, Engels, & Baumeister, 2005; Steinberg, Lamborn, Dornbusch, & Darling, 1992; Seginer & Schlesinger, 1998; Silk, Morris, Kanaya, & Steinberg, 2003; Claes, Lacourse, Boucherd, & Perucchini, 2003; Lamborn & Felbab, 2003). In other words, the parenting style as perceived by children and adolescents matters. The fact that parenting style as context for socialization or development (Darling & Steinberg, 1993) can be investigated through self-report questionnaires is an advantage. This is because it enables an investigation of the links between the measures that are widely used to investigate perceived parenting style and the saving related measures used in Study 1 and 2. Hence, through the use of self-report questionnaires in Study 3, new hypotheses formulated at that stage of the research can be tested. Furthermore, in the final study, quantitative data are needed from parents and adolescents, in order to test the model mentioned in the outline of this thesis in Chapter 2 (paragraph 2.5). Thus the consistent use of surveys

throughout the research presented in this thesis was motivated by the advantages of this method for tackling the research questions posed at the outset and at various stages throughout the research process.

3.4 Methodological issues

3.4.1 Saving measures

When saving is investigated, the focus can be on different forms of saving, the result of saving behaviour or the saving process itself. With regard to the result of saving, it has been established that a child's savings (i.e. assets) are unlikely to give an account of the child's saving behaviour, because money in a child's savings account is most likely an amount that has been saved on behalf of the child, by parents, grandparents or other relatives (Sonuga-Barke & Webley, 1993). This can still be the case for money in a savings account that belongs to an adolescent, even though adolescents are using saving accounts themselves (Furnham & Thomas, 1984a; Furnham, 1999). Nevertheless, savings in a saving account can be assumed to be the consequence of not just one decision but a whole series of separate savings decisions and savings decisions by a number of different individuals to boot. This illustrates the restricted value of savings as a measure for saving during adolescence and explains why savings will not be considered. With regard to the form of saving, residual, contractual and discretionary saving were distinguished. Residual and contractual saving will not be considered for the purpose of this research. Instead, the focus will be on saving behaviour as a process.

Saving by adjusting expenditure

The first measure developed to investigate the saving behaviour of adolescents is based on the assumption that saving refers to money deliberately accumulated during a certain period of time, because a saving decision has been made. Nevertheless, simply asking about someone's saving behaviour during the last 12 months for example is rather unspecific. Within a year, there may be differences in saving before and after a holiday, or a 12-year-old might have saved a lot of money before

Christmas to buy presents, but throughout the year, money could have been spent easily and quickly. This demonstrates that attention should be paid to the specific time period selected for research on saving. In addition, with regard to the length of the saving period, it should be noted that 11-, 12- and 13-year-olds may find thinking about a whole year (be it in the past or in the future) difficult, even if according to Friedman (2000), 10-year-olds are able to correctly judge distances of events such as Valentine's Day and a number of school holidays, that reach up to a year into the future. Therefore, when asking about adolescent saving behaviour a shorter period of time should be selected and the period needs to be exactly specified. Based on the results of Pilot Study 1, one month was chosen as the period of time adolescents were required to think of with regard to their saving efforts.

Furthermore, adolescents may think of their unspent money as money they have saved. This would however correspond to residual saving (Katona, 1975). Therefore, the first saving measure should also account for how money is saved. Only by asking additional questions about the how, will it be possible to capture the saving behaviour of adolescents that is active and purposeful (as opposed to passive for no other reason than lack of spending). To achieve this, three response items were developed that tap into the adolescents' adjustment of expenditure ('... I go out / into town less often.'; '... I stop spending money on some of the things I usually buy.'; '... I buy cheaper things.') and two saving items ('... I start saving.'; '... I calculate how long it would take me to save up for it.'). This composite measure is used to explore whether adolescents do think of saving as an appropriate way for getting larger sums of money when alternatives such as working or asking parents for more money are taken into account. Therefore, this measure will provide us with information about the relative importance of saving during adolescence. Subsequently, this measure is used to differentiate between adolescents who chose to save and those who chose to solve an income constraint problem differently.

Saving as a habit

Another way of thinking about saving is saving as a (continued) habit, when control of expenditure is a major goal (Wärneryd, 1999). This means that people save for no specific goal. For such saving behaviour, future spending is not the main purpose.

Cash management or buffer saving might be the primary purpose. Marshall (1966) put the idea forward that in some cases saving might be the result of the fact that people have learned to be careful with their money and continued to economise despite at some point, such cutback was not necessary any more. A study that distinguished between savers and non-savers is the work by Lunt and Livingstone (1991). They investigated psychological, social and economic determinants of recurrent and total savings, and differentiated between savers, non-savers with savings and non-savers. Savers were those who had savings and saved regularly. Locus of control discriminated between savers and non-savers, which suggests that those who were classified as savers were better able to control their expenditure in general. Because control of expenditure is important for saving, it was decided to develop a number of items (eight in total) that tap into a young person's saving habit or someone's general tendency to save when young (a description of this measure is given in Chapter 4, paragraph 4.2.2). In the following research, this measure is used to distinguish between adolescent savers and non-savers. In addition, this measure is subsequently used as a dependent variable when attempts are made to predict the saving behaviour of adolescents.

So in the following studies adolescent saving behaviour will be measured in two ways: active saving through adjustment of expenditure and saving as a habit (i.e. control of expenditure).

3.4.2 Income measures

Income is an important measure when looking at saving behaviour because it is a crucial determinant of someone's propensity to save. Therefore, a good approximation of the income of the adolescents who are taking part in the following studies is needed. Accurate self-report measures of income are difficult to obtain from adults (Radner, 1983). It was expected that this would also be the case for adolescents (Olivas, 1986). However, the problems encountered with adolescents are different to those when trying to obtain income measures from adults. A good consideration of the sources of income that Polish adolescents seem to have next to their pocket money or allowance is presented by Goszczyńska (1996), who found that younger adolescents received extra income more frequently from helping their

parents around the house, while older adolescents received extra income more frequently from paid work outside the house. To help the adolescents calculate an estimate of their income and to include all their different sources of income, a decomposition approach was taken in the following research: adolescents were asked to indicate whether a certain source of income (i.e. activity money from parents, or money for small jobs for people other than their parents) is relevant for them and in addition, they were asked how much money they get from this source on average per month. This approach was used to help them include all money received in a typical month. One month was chosen because one month was considered a relatively easy period of time to assess by an 11-year-old as well as an 18-year-old participant. Besides the sources of income included in the questionnaire, adolescents were given the opportunity to state additional sources of income that might not have been considered by the researcher. This was done to obtain an income measure that is as complete as possible. Any money that parents would be saving on a regular basis on behalf of the child is not included, because it is assumed that the adolescent has no access to it (Sonuga-Barke & Webley, 1993). For the purpose of the following studies, only income that is available to the adolescent was considered relevant, as this income should be related to their saving plans and decisions.

3.4.3 Other measures

Care was taken to design the questionnaires in such a way that most students as young as 11 and 12 could fill out the questionnaire without the help of the researcher or teacher. This means that the questionnaires were piloted with 11- and 12-year-old children and where necessary items were shortened or simplified. A first impression of how well items were designed in general was always obtained while the students filled out the questionnaires. Ambiguous items would for example result in questions posed by students. Subsequently, after data entry, indicators for a poor item for example are that an item has been skipped by a number of students or that it has only received a narrow range of responses. Free use of 'strongly agree' or 'strongly disagree' answers are on the other hand indicators for items to be working well.

For the investigation of saving motives that were considered potentially relevant to adolescents, an initial number of 39 statement items were devised. They were

designed by the researcher to tap into a number of saving motives selected from the literature and empirical studies reviewed in Chapter 1 (paragraph 1.4.1). In making up items that deal with adolescents' saving motives, attention was paid to create statements that were relevant to young people. Particular attention was paid to the meaningfulness of the motive items to adolescents. According to Scott (2000), children provide reliable responses about events that are important to them. As scaling-method for the motive statements, a 5-point Likert scale was used from 'not at all important' to 'extremely important'. Based on scale reliabilities, the best combination of motive items was selected from the statement item pool of Pilot Study 1⁷ (see Appendix 1), which resulted in a total of 36 items for Pilot Study 2 (see Appendix 2) and 33 items for the investigation of adolescents' saving motives in Study 2⁸ (see Questionnaire Study 2, Appendix 3). Examples of items tapping into the motive precaution are 'I save money in order to have a buffer just in case' and 'I always keep some money aside, in case I need to buy something I hadn't plan for'. An example of an item tapping into the motive independence is 'I save money because then, I don't have to ask my parents for the more expensive things I want to buy'. Where possible, multiple indicator items (at least two) were developed for each motive included.

To investigate adolescents' attitudes towards saving, the writing of attitude statements was guided by three themes found in the literature as reviewed in Chapter 2. The first theme adheres to saving as a skill, saving as something that is potentially difficult, something that can be learned, with the consequence that once mastered, someone will feel pride. The second theme relates to saving as something that is morally good, saving as something one should do. The third theme is associated with the role of parents as educators or protectors. In addition, the item pool was composed in such a way that the items were both meaningful and interesting to adolescents. According to Oppenheim (1992), this is particularly important for the design of attitude statements. Because questions concerning attitudes are most effective when related to concrete realities (Gray, Williamson, Karp, & Dalphin, 2007), most of the attitude items were designed in such a way that they concerned

⁷ Pilot Study 1 was conducted with 167 students from two age groups ('years' in school), coming from five different schools in Exeter.

⁸ Pilot Study 2 was conducted with 225 students (two age groups, Year 7 and Year 10 in school) from four different schools in Exeter.

the money management and saving behaviour of adolescents. Again, a 5-point Likert scale was used through which the adolescents could indicate the degree to which they agreed with each attitude statement (from 'strongly disagree' to 'strongly agree'). In Pilot Study 1, an initial number of 47 attitude statements were included. In Pilot Study 2, an additional 18 items were tested for relevance and appropriateness of wording. Based on a factor analysis that revealed the underlying structure of all attitude items (five factors explaining 49 percent of the variance) as well as on scale reliabilities, 30 items were selected for the 'saving attitude scale' presented in Appendix 4. This 'saving attitude scale' was subsequently used in Study 2, Study 3 and Study 4.

Furthermore, items that were obtained from valid scales were amended so that they were understandable and appropriate for use with adolescents. To ensure that items and scales would 'work' with the age groups studied, Pilot Study 2 and Pilot Study 3 were carried out before the final questionnaires for Study 2 and Study 3 were developed. In one case, a bright 12-year-old student from a school that did not take part in the research, contributed to the wording of items that needed rephrasing. Based on the results of the pilot studies the measurement of a variable and a construct were also improved. In one instance a ranking system was changed into a 7-point scale (compare last paragraphs in Appendix 1 and 2). The aim of Pilot Study 4 (with adult participants) was to help identify questions that could be used with parents and to establish underlying structures of measures that should be included in the final study (see Appendix 5 for the questionnaire used in Pilot Study 4).

Throughout all four studies with adolescents, for certain measures 7-point scales were used. The reason for this was that in some cases a more refined and detailed measurement was considered appropriate. For reason of simplicity, the majority of the measures included were presented with five answer possibilities. In most cases, the 5 point rating scales ranged from 'strongly disagree' to 'strongly agree'. Furthermore, with measures containing more than ten items, two blocks were used and presented to half of the students in different order so as to prevent order effects.

From age 11, children are able to respond to standardized questionnaire instruments (Scott, 2000). In general, only a few students of the youngest age group needed any

help from the teacher to fill out the questionnaire. In those cases, the teacher had expected this, because the particular student would need help on similar tasks on a regular basis. Across the board, students seemed to be interested enough to work their way through the questionnaires without getting frustrated or bored. The majority seemed to like the task which speaks for the success of the pilot work conducted in advance.

3.5 Sampling issues

3.5.1 Selection of schools

In order to investigate the saving behaviour of adolescents in the UK, students from various schools and colleges in and around Exeter (Devon) were invited. A sample drawn from a town or city, in which a university (and therefore the researcher) is located, is typical for developmental research (Miller, 1998). Often, this results in mostly middle-class and predominantly white children taking part in studies, which means that the sample departs from perfect representativeness. However, virtually any sample deviates from perfect representativeness, but not all deviations have an effect on the generalisability of the results. The school student population in Exeter for example is considered representative of school students (pupils) in small cities (see <http://www.exeter.gov.uk/>). However, for the research presented in this thesis, only pupils from state schools were invited. The absence of private schools in the sample skewed it slightly away from the middle classes. It should also be noted that Exeter is a predominantly white city, so that the generalisation to other UK ethnic groups is problematic. Nevertheless, with the measures that were included, generalisations to the wider population of pupils in the UK could be made (with some caution).

Throughout a school year, students regularly participate in research and head teachers carefully decide which project is given priority. Fortunately, head teachers considered students' money management an important subject that would also be of major interest to their students. Therefore, various schools tried to make data collection possible by allowing the researcher to use teaching groups and tutor groups for the questionnaires to be filled out.

A major advantage of doing research in schools is that the researcher has few problems with the level of the response rate. For students, taking part in a research project is something that is different to a normal lesson (although they can be expected to take part in studies on a regular basis, it's not part of their school routine) and the fact that they were asked about their opinions and behaviours with regard to their use of money seemed to spark their interest straight away. Participation was voluntarily, which means that the students who attended school on the day when the research took place, had the choice of taking part or doing something else. This meant that taking part in the study was not taking away part of their leisure time, as would have been the case if students were asked to fill out the questionnaire after school, at home or during a spare hour.

For practical reasons, it was decided to collect data in schools and colleges that could be reached from the University within one hour of travel time. This was important with regard to the size of the samples, particularly when data collection took place during tutor groups, which in some cases would mean that the groups were very small and the researcher had to come back several times. In addition, inviting students from schools that were not too far away was an advantage in particular for the last study where students were reminded of the study by the researcher in person and where reminder letters were sent out to the parents via the school. Due to data protection restrictions, the researcher was not able to send letters to the parents who needed a reminder, but address stickers had to be put on the envelopes in the school. This meant that for certain logistic and administrative details, the researcher came to the school to minimize the workload of the staff involved.

Recruiting students at different ages from a selected number of schools with matching catchment areas ensured that the populations did not differ in too many ways. Usually, this is a problem when developmental researchers draw samples not only from different ages but also from different settings (Miller, 1998).

For the final study, where the cooperation of parents was needed, great care was taken to address the parents with a cover letter in such a way that their interest would be aroused (see Appendix 6). This cover letter was used to impress parents with the

importance of the study and their participation in it as well as to assure them that all data will be handled in a way that protects their identity. Furthermore, because in this final study incentives were offered as a reward for participation, the cover letter also explained how the parents could ‘earn’ a cinema voucher for their adolescent child.

3.5.2 Selection of age groups

The first study was designed to investigate the importance of saving during adolescence in general and in light of saving alternatives throughout adolescence. For this purpose, and in order to establish the importance of saving most accurately, students from all age groups were selected. That is, students between the age of 11 (Year 7 in UK schools) and 18 (1st Year in college) were invited. Sixteen-year-olds could not take part in this first study, because during the period of data collection, they were involved in their final exams, which meant that access to this final year in high school was denied.

After having established the relevance of saving while young, the second study was based on a smaller sample with students from three age groups. This enabled the researcher to investigate developmental changes while reducing the time needed for data collection.

The third study aims at investigating saving in the context of the family. For this purpose adolescents from one age group (Year 9 in UK schools, 13- to 14-year-olds) were selected. The thesis finishes with a study where both parents and their adolescent child were invited. For the last two studies, 13- to 14-year-olds have been selected because at this age, peer influence was considered not to be as important yet as for example for 16-year-olds. In addition, for practical reasons, younger students were invited, because data collection took place in spring time. Around this time of the year, older students were taking major exams, which would have made access to those years in school difficult. In the last two studies, developmental changes (age differences) were not looked at and adolescents’ saving behaviour was therefore investigated at just one age.

3.6 Strength and weaknesses of the chosen methodology

All empirical investigations have strengths and weaknesses that need to be considered when evaluating the results and implications of them.

3.6.1 Strengths

Through the use of survey studies and reliable scales, the research questions could be addressed appropriately. This means that in a first step, light could be shed on a number of saving related developmental changes during the second decade of life and significant relationships between selected variables could be established. In a second step, the saving behaviour of adolescents could be investigated in the social context of the family. For this purpose, quantitative data were needed.

Using schools to recruit participants turned out to be an advantage because collecting data during normal school hours meant students did not need to spend their free time on a questionnaire. The result of this was a very high response rate of relatively large and representative samples. The opportunity of surveys to produce results that can be generalized to a larger population is a general advantage of this approach. Another general advantage of this method is the relatively low cost associated with gathering data. Furthermore, only a limited range of behaviours is sufficiently public for the researcher to study it directly (in this respect, the absence of spending was considered problematic). Surveys, on the contrary, can be applied to a great range of behaviours, because nearly any type of behaviour can be talked about or reported in a questionnaire (Gray et al., 2007).

Furthermore, because the study was introduced appropriately to the students not only by the researcher but also by their teacher, this inspired confidence and meant very few students decided not to take part. It was obvious in class, that the students were curious and interested because of the questions they posed in the beginning and because of the seriousness with which they worked on questionnaires. Apparently the topic of money and money management is (still) of great interest to adolescents, a finding that has already been established by Symonds in 1936 and 1940. Symonds

reported that money matters (earning, spending, saving, etc.) was among the areas that interested adolescents most.

The fact that the measures that were devised for the purpose of the research described in this thesis were all piloted strengthens the findings. It also meant that as a result of the pilot work, the number of items needed to investigate a certain concept or behaviour could be reduced. This allowed for a number of measures to be included in total with the result that overall the studies were substantial. At the same time, care was taken to keep each questionnaire relatively short. Students were able to fill out their questionnaire in a period of time that was short enough for them to concentrate throughout (on average, filling out the questionnaire did not take longer than 30 minutes).

Through the repeated use of some of the measures, outcomes could also be replicated, which again strengthens the findings.

Another advantage of this approach is that the data collected could be based on a number of reliable measures. At the same time, the existence of these reliable measures was also a reason for use of this approach.

Finally, through this approach, the family context within which the development of saving during adolescence takes place could be investigated using parent-child-triads. This is something that has not been done before and therefore is unique to the study of saving behaviour in adolescents.

3.6.2 Weaknesses

The main weakness of the chosen approach is that only one methodology has been used. Todd, Nerlich, McKeown, and Clarke (2004) suggest that a combination of methods can be an advantage when investigating a given behaviour or phenomenon in depth. Mixing methods in psychology can help to produce more accurate models and a better understanding of the subject under study. However, while the use of interviews or diary studies was considered at a number of points during the research process, surveys were carried out because in each case they suited the research

questions best. That is, the chosen method was logically stronger and technically feasible and it enabled the fundamental investigation of the proposed relationships as well as the test of the model mentioned in Chapter 2 (paragraph 2.5).

Furthermore, it should be noted that the cross-sectional approach taken in Studies 1 and 2 does not directly measure age changes, because different adolescents are tested at different ages. This also means that with this approach, it is not possible to answer questions about the stability of saving behaviour over time.

A general weakness of research based on surveys concerns all problems and biases that accompany self-report measures. Gray et al. (2007) recommends that self-reports should be limited to topics that those who fill out the questionnaires have enough knowledge or insight about. Notwithstanding, people differ with regard to their self-awareness and introspectiveness which can affect participants ability to analyse themselves. Another example of a problem of self-reports is social desirability (Miller, 1998). In order to reduce this, it was emphasized to students, who participated in the studies that there were no right and no wrong answers. Furthermore, all studies were introduced as being about money management, as opposed to saving behaviour. This means that the studies were presented in a framework that was as neutral and non-evaluative as possible.

A final point should be made with regard to time of measurement effects. Data obtained through cross-sectional surveys are susceptible to time of measurement effect in the sense that responses can be influenced by immediate historical events (Fife-Schaw, 2000). This means that it is possible that in February 2009, young people's attitude towards saving as something that is (morally) good for example may differ from this attitude of young people who took part in Study 2 or Study 3, for which data were collected in spring 2003 and 2004 (well before the credit crunch in 2008).

3.7 Ethical considerations

The students were asked to help with a research project and were informed that what they were doing was voluntary. In other words, they were given the opportunity to refuse to take part if they wished so. None of the studies reported in this thesis were considered to raise any ethical concerns. Therefore, the written approval of children taking part in the study was signed by the Head Teacher and not by the parents of the students involved. This was agreed upon with the Ethics Committee of the School of Psychology (at the University of Exeter). The questionnaires were solely used for research purposes and this was done in accordance with the ethical standards of confidentiality that govern psychologists. At any time, participants could have wished that all material would be destroyed. In order to ensure confidentiality during the last study, all information was identified by an identification code. Any connection to names was only used for purposes of the incentives and the prize draw and this information was destroyed afterwards.

3.8 Conclusion

The choice of survey studies is driven by the research questions of this thesis. Surveys were the most appropriate way of obtaining information that will help answer the questions at issue. At the same time, this choice has been made because valuable information has already been obtained through survey and panel studies with adults, which meant that a number of suitable measures were available that could be amended and adapted for use with adolescents. Expanding on the findings from the first two studies, the social context of the adolescents' family will be taken into account. The continuing use of surveys flows from this. Survey studies will be used throughout this thesis in order to investigate the saving behaviour of adolescents in the social context of the family in depth. The general description of the samples, procedures, strengths and weaknesses in this Chapter do apply to all the empirical work presented in this thesis. Where necessary, more detail is given in the particular Chapter.

Chapter 4 - The Importance of Saving During Adolescence

4.1 Introduction

Saving is just one way of getting larger sums of money. To date, research on children's and young people's saving behaviour has looked at saving in isolation. That is, the focus has been on whether children save or not, how and for what reasons they save and how much they save. In doing so, other ways available for getting larger sums of money and their potential influence on a young person's decision to save have not been accounted for. It could for example be pointless to save if one could be reasonably sure of intermittent gifts from parents. At present, it is therefore unclear how meaningful the option to save is for young people, when looked at in a wider context. The first study sets out to put saving into this wider context. The study has been designed to investigate saving in relation to working, selling and relying on parents as a mean for obtaining larger sums of money. Since this is a novel approach to the study of saving, the first and primary objective of this study will necessarily be one of description. The study will provide us with information about how important saving is during adolescence relative to other ways of getting hold of larger sums of money.

The relevance of the saving alternative 'relying on parents' stems from the results and observations of research carried out by Furnham and Thomas (1984a), Webley, Levine, and Lewis (1991), Sonuga-Barke and Webley (1993), as well as Fiates, Amboni, and Teixeira (2008). In the study by Furnham and Thomas (1984a), boys saved more than girls and they reported that their parents would give them more money if they spent it all. Even if this response does not reflect what actually happens but what they believe their parents should do, it seems as if unconstrained spending followed by requests to parents for more, would be a clever way of increasing one's income. The attempts to manipulate the experimenter at the end of the game made by one child in the study by Webley, Levine, and Lewis (1991) and a

number of children in the studies by Sonuga-Barke and Webley (1993) also indicate that in real life, negotiations with parents might help children with their shortage of money. Webley et al. (1991) highlight that a strategy considered inappropriate in an experimental setting may be appropriate in real life. They put forward the idea that children's saving should be regarded as a social activity that is dependent on negotiations with one's parents. This is supported by the results of a recent focus group study with 57 Brazilian primary school students (aged seven to 10 years) by Fiates, Amboni, and Teixeira (2008), who point out that more than one third of the participants in their study regularly try to convince their parents through negotiations to buy them things they like (i.e. items that might be too expensive to be bought from their regular pocket money or allowance without a period of saving).

Earning is another way to quickly increase one's income. It has frequently been demonstrated that children and adolescents acquire money through paid employment or domestic work (Hollister, Rapp, & Goldsmith, 1986; Goodnow, 1988; Warton & Goodnow, 1995; Mangleburg & Brown, 1995; Doss, Marlowe, & Godwin, 1995; West, Sweeting, Young, & Robins, 2006). However, this saving alternative is not necessarily a realistic option for every adolescent. To take on a paper-round or a Saturday job, one needs to be old enough and for an adolescent to be able to earn from domestic work, it is essential that the parents provide for such opportunities around the house.

In principle, it would be possible for adolescents to make money through selling things (i.e. old games or mobile phones), although it is not known how prevalent this option is in the UK. Goszczyńska (1996) for example found that selling materials for recycling is a source of income for adolescents in Poland. In order to obtain a picture of saving in relation to saving alternatives that is as complete as possible, this money making opportunity should be taken into account.

With more money at hand, it is easier to save some of your money. Since differences in disposable income are likely to influence young people's ability to save (Keynes, 1936; Katona, 1975), it is important to understand the financial background against which students taking part in this first study decide to save as opposed to other ways

of getting larger sums of money. Therefore, students will be asked in detail about their sources of income and the amount of money they have.

Monetary practices of pre-adolescents (participants were between 11 and 12 years of age) have been investigated by Hollister, Rapp, and Goldsmith (1986), who included the two income sources money received as allowance and money that is earned. Their results showed that pre-adolescent boys and girls did not differ significantly with regard to how they handle their money, but with regard to their means of obtaining money. Boys more often seemed to earn money while girls more often seemed to receive an allowance. Furthermore, they found that those who earned regularly claimed to save more than those who did not earn regularly. It should be noted however, that the saving questions used in their study were not specific enough to eliminate the possibility of children referring to residual saving rather than purposeful saving.

In their study on middle school children's sources and uses of money, Doss, Marlowe, and Godwin (1995) considered money from parents (the sum of allowance money, money for school and extra-curricular activities, money for errands, money for no specific reason, and money received as an incentive), from earnings and from gifts. Saving appeared as one among four money usage options (required spending, discretionary spending, saving and giving). As found by Hollister et al. (1986), Doss et al. (1995) report that earnings or amount of money earned was the only variable associated with the level of savings in 11- and 12- and 10- to 15-year-olds. Nonetheless, also in their study it remains unclear whether children's reports about saving actually referred to discretionary saving or, what seems more likely, to residual saving or saving as a habit, since questions such as 'I save money for more than two months for no specific purpose' and 'In the past four weeks, did you save?' were used.

With regard to adolescents' earnings, West and Sweeting (1996) distinguished between money for doing jobs around the house and money from a regular paid job. This discrimination was also made by the Polish participants of Goszczyńska's (1996) explorative study. Her sample consisted of primary and secondary school pupils (aged 12 to 15 and 16 to 18 respectively). A large proportion (47 percent) of

the secondary school pupils did not seem to have any income other than pocket money received from parents. In addition, a reasonable large proportion (50 percent) of this older group of adolescents did not save at all. Whether those who had no additional sources of income were actually those who did save, remains unclear. Goszczyńska ascribes the lack of saving to the possibility that Polish adolescents would have problems meeting their current needs.

Warnaar and Van Praag (1997) investigated the income and expenditure of Dutch teenagers. They distinguished between money received from parents unconditionally and in exchange for household duties (Miller & Yung, 1990), extra money from parents, weekly jobs, holiday jobs and study grant. Saving was one of the expenditure categories they looked at. They report more saving by working than non-working teenagers. The data they used were from 1984, 1990 and 1992. In 1992, almost 50 percent of the adolescents in the sample (ranging in age from 13 to 20 years) had a weekly job.

At first sight, the studies described above suggest that the saving behaviour of young people seems to be mostly related to their income and earnings. Earning is in effect a quick way of obtaining larger sums of money and in consequence having left over money might not be surprising. It could be that young people, who earn money for the first time, hesitate to spend it and only slowly adjust to the new situation where perhaps they earn a lot more compared to the sums received from parents so far. Wärneryd (1999) refers to this as a habit lag and Keynes (1936) characterises it as hesitation to change the standard of living. Due to the weaknesses in the measurement of saving, it is likely that the results obtained reflect residual saving of those with earnings or higher incomes.

From this originates the second and third aim of Study 1. The study sets out to take a first step towards better understanding the relationship between adolescent saving and disposable income, when saving is measured in such a way that the adolescents can be expected to think of purposeful rather than residual saving. This means that the general money management style of the adolescents as well as their use of saving strategies will be investigated, so that the relative importance of demographic variables and money management variables for choosing to save can be explored.

The potential influence of money management style on saving is indicated by the findings of Lunt and Livingstone (1991). To distinguish between savers and non-savers in adults, they used a wide range of economic, demographic and psychological variables. Like others, they found that savers tended to have higher incomes, but in addition, they found that savers were less likely to spend whenever they felt like it, whereas non-savers tended to shop around. The money management of late teenagers (aged 16 to 18) has been studied by Lea, Unrath, de Wilde, and Wynia (1999), who found that females were more likely to save than males. Although Lea et al. (1999) were unable to produce an acceptable scale for money management behaviour, an interesting relationship between someone's tendency to save and whether pocket money was received from parents, emerged. Those who received pocket money were less likely to save than those who did not receive pocket money. According to them it is possible that those who knew they could rely on their parents did not feel stimulated to save. One could imagine that this might also happen with regard to earning. A young person who receives (enough) pocket money might feel less driven to earn.

On the other hand, it is possible that older adolescents are less likely to receive an allowance than younger adolescents, because conceivably, older adolescents could work to earn their spending money. This hypothesis has been tested by Mangleburg and Brown (1995) in the US, who investigated money received as allowance and money earned in relation to age, family composition and mother's working status. They expected that parents, who give an allowance to older adolescents (between 16 and 20 years of age), would also give higher amounts, because they will anticipate that a 17-year-old will have more expenses than a 14-year-old (the younger adolescents in their sample were between 14 and 15). While their first hypothesis was confirmed (the younger adolescents in their sample were more likely to receive an allowance), this was not the case for their second hypothesis (age had no significant effect on the amount of the allowance received). The finding that older adolescents are less likely to receive an allowance than younger adolescents is in keeping with the results of Leiser and Ganin's (1996) study on the economic behaviour of young people in Israel. According to them, parents in Israel are trying to encourage economic independence more through part-time work than through an

allowance. Moreover, they found that those who work or participate in family discussions on finances reported to save more, with boys claiming to save larger sums than girls.

The first study sets out to shed light on the sources of income adolescents have at various ages. Subsequently, how adolescents manage their money will be investigated. In this regard, their use of temptation inhibiting strategies will be explored. In addition, a carefully designed set of questions will be used to study discretionary saving, rather than residual saving, in relation to working, selling and relying on parents. This will provide us with information about the relative importance of saving during adolescence. Finally, the adolescents' saving choices will be investigated in relation to their income and money management style, to examine how adolescent savers differ from adolescent spenders (non-savers). Special attention will be given to the question whether children who choose to save as opposed to rely on parents differ on money management and use of temptation inhibiting strategies regardless their age.

The aims of Study 1 can be translated into the following research questions:

- (1) What do adolescents do when confronted with an income constraint problem? More specifically (a) what are their strategies for getting larger sums of money and (b) do they prefer different strategies at different ages? How important is saving during adolescence as a way of getting larger sums of money, when saving alternatives are taken into account?
- (2) How do adolescents manage their money and what are the strategies they use to resist temptation when trying to save up for something?
- (3) Who considers saving? Can money management practices and temptation inhibiting strategies help explain differences between adolescent savers and non-savers, when saving is measured in such a way that adolescents are forced to think of discretionary rather than residual saving? Is it possible to distinguish between adolescent savers and non-savers, when saving is measured in such a way that adolescents are forced to think of discretionary rather than residual saving?

4.2 Study 1

4.2.1 Participants and procedure

Four hundred and seventy-seven students from various schools and colleges in Exeter, UK, took part in the study. To ensure that students were equally dependent on their parents, it was decided to select young people going to school and to college full-time, as opposed to young people who have started full-time work or were in work-based training. The school leaving age in the UK is 16. The percentage of 17-year-olds participating in post-compulsory full-time education in England and Wales for the school year 2000/01 was approximately 60 percent (National Statistics, 2007). It is assumed that these students all approximately have the same living expenses. Since the Exeter high and middle schools involved are state-funded schools, it is likely that some of the more affluent middle class children are not included. The state educational system caters for some ninety three percent of all schoolchildren in the UK (British Embassy, 2007). The middle schools invited were selected in such a way that the students were living in the catchment areas of the high schools that were involved. In doing so it was ensured that there was no difference in socio-economic status between students from different years in school.

Schools were approached via telephone and if interested, received an invitation via post. With the cover letter, the questionnaire and a description of the research project was enclosed. Usually, further arrangements were discussed via e-mail and telephone with the head of the years in question. Because the survey study was run during school-hours with students taking part voluntarily, an alternative task was produced, so that those who decided to opt out were still occupied. In addition, not all students needed the same amount of time to fill out their questionnaire and for those who finished early a follow-up task needed to be available. For this purpose, a story crossword was set up that was based on a story of money (Orna-Ornstein, 1997, example given in Appendix 7). This story crossword turned out to be most suited to students aged 14 or older. For them it was difficult and interesting enough to be a challenge, so that one wanted to manage by oneself. For the younger students, the crossword seemed to be too difficult. This resulted in group work and unnecessary noise. Therefore, an easier version was prepared which suited them better (they

received the crossword together with a list of the missing words in alphabetical order).

Students were given a brief explanation about how to best fill out the questionnaire (i.e. honestly, without thinking too much). The researcher explained that this was not a test but a research project about money management (saving was not mentioned) for which they will be asked about their opinions, thoughts and experiences. Students were informed about the study being anonymous and that they would not need to put their name on the questionnaire (some of them still did this nonetheless). Furthermore, students were informed that they were free to take part and that they had the possibility of doing an alternative task (the story crossword). Once finished with their questionnaire, the students were thanked and given the story crossword, if there was time left. A note was made on the questionnaire had a student been working together with the student sitting next to him or her and a note was also made on the questionnaire, had the student been disruptive or had s/he made negative comments about the survey. During data entry, these questionnaires were checked for indicators of not taking the task seriously (i.e. ticking the same box throughout a block of questions or the whole questionnaire). Due to the length of the questionnaire, usually not much time was left once all students had finished filling out their questionnaires. The researcher would briefly inform the students about the fact that the study was set up to investigate saving behaviour apart from money management. Because some of the students who took part in the first session had asked for the key to the crossword, the researcher prepared a version with the results that would be given to the teacher at the end of the lesson, so that they could round this off in their next tutorial hour. In addition, all students received a handout on money management (see Appendix 8).

4.2.2 Questionnaire

The questionnaire consisted of three parts. After piloting income questions and questions designed to investigate the context of saving during adolescence, it was decided to use one month as the point of reference for this study. The first part of the questionnaire covered 24 income questions helping students to calculate their monthly income. Students were asked in detail about various sources of income and

the amount of money retrieved from this on average each month. In the second part, students were asked about spending habits, general money management and the use of temptation inhibiting strategies. The third part was designed to investigate the role saving plays among alternative ways of getting larger sums of money. An example of the questionnaire can be found in Appendix 9.

Measures

Monthly income

Six of the income questions could be combined to show the students' total income on average each month. Sources taken into account were 'pocket money/ allowance', 'activity money'⁹, 'money from doing small jobs for parents/ step-parents', 'money from doing small jobs for people other than parents/ step-parents' and 'money from part-time or Saturday-jobs'. An additional option 'other money' was given to report any other income not covered by the former.

Money management

To investigate the students' saving and spending habits, several questions about how respondents generally dealt with their own money were included. Six different but comparable five-point scales were used. Apart from one item all correlations between the money management items were significant at the one percent level. Highly correlated items (5 in total) were used to build a 'saving scale'. The significant but low correlations of the other items suggested that these measures were related but distinct. The items that were used for the 'saving scale' were 'What do you usually do with your pocket money/ allowance?', 'What do you usually do with the money you earn?', 'When I get pocket money, I usually...', 'I'm good at saving.' and 'How do you deal with your money in general?'. Answer possibilities given for this last question for example were 1: keep as much as I can; 2: spend it carefully; 3: spend some and save some; 4: spend it easily and 5: spend it easily and quickly. All items apart from 'I'm good at saving.' were used in the reversed form so that a high

⁹ Money received from parents for certain fun activities, such as the cinema or the swimming pool (activities the adolescent is not expected to pay for her- or himself).

score on the scale means that someone generally tends to save money (N = 279, alpha = .85).

Temptation inhibiting strategies

Students were asked about perceived difficulties and usage of strategies in income constraint situations ('When you are trying to save up for something, how do you stop yourself from spending too much?'). Their own words for describing these were considered appropriate, since not much is known about this yet.

Strategies for getting larger sums of money

Confronted with an income constraint problem (Sometimes you might find that you want to buy something for yourself,¹⁰ but it costs more than you can get in one month. How would you go about getting the money for the thing you want to buy?), students were presented with a variety of options for getting hold of larger sums of money. For each concept, 'relying on parents', 'saving', 'working', 'adjusting expenditure', and 'selling', the list of options included three statements. These were based on the result of Pilot Study 1 and Pilot Study 2 and had been designed to be relevant to students of the age range studied. An example of working is 'I ask for more shifts at work'; an example of adjusting expenditure is 'I stop spending money on some of the things I usually buy'. Using a 7-point-scale (1: 'Would certainly not do this' to 7: 'Would certainly do this'), students evaluated each statement according to the likelihood with which they would choose to do either of them.

¹⁰ Since the results of Pilot Study 1 indicated that there was no difference between saving up for something for oneself and saving up for something for somebody else, it was decided to focus on goal saving for personal purposes.

4.2.3 Results

Background information

Sample

Seven students were excluded from the sample as a result of not taking the task seriously or working together. These students had either given the same answers as the person sitting next to them or had given the same answer throughout most of their own questionnaire. The sample used for this study therefore consisted of 470 students (126 eleven- and twelve-year-olds, 87 thirteen-year-olds, 93 fourteen-year-olds, 82 fifteen-year-olds and 82 sixteen-, seventeen- and eighteen-year-olds).

Monthly income

Table 4.1 shows students' various sources of income, the percentage of recipients (or earners) and the amounts that lead to their total income. The older a student, the more money they have at their disposal. Parents are the most important source of income for students aged 15 or younger. For older students (1st year college), the most important source of money is out of school-hours employment. Earning one's own money outside the home does not only become more important, at the same time, receiving money from parents seems to become a less important source of income.

Table 4.1 *Separate sources of income and monthly amount comparing students from different years*

| Students | pocket money / allowance | activity money | small jobs for parents | small jobs for people other than parents | part-time or Saturday jobs | other money | total income (in £) |
|------------------------------------|--------------------------|----------------|------------------------|--|----------------------------|-------------|---------------------|
| Year 7 (11.86 yrs) | | | | | | | |
| average amount per month | 21.18 | 14.27 | 7.70 | 7.59 | 31.22 | 8.11 | 42.64 |
| percentage of recipients / earners | 86.73 | 80.53 | 68.14 | 30.97 | 15.04 | 44.25 | |
| Year 8 (12.85 yrs) | | | | | | | |
| average amount per month | 27.57 | 17.91 | 8.63 | 9.78 | 43.03 | 17.78 | 60.62 |
| percentage of recipients / earners | 88.37 | 91.86 | 60.47 | 26.74 | 24.42 | 44.19 | |
| Year 9 (13.83 yrs) | | | | | | | |
| average amount per month | 32.75 | 18.08 | 10.07 | 13.75 | 36.39 | 14.55 | 75.07 |
| percentage of recipients / earners | 96.39 | 83.13 | 59.04 | 30.12 | 37.35 | 34.94 | |

| Year 10 (14.79 yrs) | | | | | | | |
|------------------------------------|-------|-------|-------|-------|--------|-------|--------|
| average amount per month | 30.74 | 21.04 | 11.14 | 17.28 | 79.18 | 19.59 | 88.52 |
| percentage of recipients / earners | 85.98 | 84.11 | 58.88 | 26.17 | 39.25 | 26.17 | |
| 1st year college (16.91 yrs) | | | | | | | |
| average amount per month | 39.10 | 16.89 | 9.33 | 16.69 | 169.46 | 61.82 | 184.45 |
| percentage of recipients / earners | 51.85 | 58.02 | 17.28 | 16.05 | 83.95 | 14.81 | |

Activity money is often given for going to see a film in combination with other leisure activities such as sport and going out with friends. Other money is given for various reasons. Students in Year 7 more often reported getting money as a reward, than students in Year 10. The majority of high school students received extra money from (visiting or seeing) grandparents and other relatives. Older students less often reported receiving other money in general, but those who did claimed a bigger amount.

There was no difference between boys and girls in the amount earned from part-time or Saturday jobs ($t = -.892$, $df = 175$, n.s.), in the amount earned from doing small jobs for one's parents ($t = -.703$, $df = 250$, n.s) and in the amount of pocket money/ allowance received from parents ($t = -.907$, $df = 382$, n.s.).

General money management skills

Money management

Results of the students' reports on how much and how quickly they usually spend their money showed that about a third (27.5 percent) of all students described themselves as easy spenders (spend it easily/ spend it easily and quickly). On the other hand, about 40 percent (41.3 percent) spend their money carefully and make sure that there is always some left. A small group (12.8 percent) reported balancing income and spending in such a way that they can spend a little bit every day until they get more.

Approximately a half (48.3 percent) claimed to be good at saving. Compared to male students, female students scored significantly lower on the 'saving scale' ($t = 2.709$, $df = 463$, $p < .01$). Thus, female students reported to generally save less than male students. When students with and without out of school-hours employment were compared with regard to their general tendency to save money, no difference was found ($t = -.094$, $df = 459$, n.s.). Also, when students with and without pocket money or allowance were compared with regard to their general tendency to save, no difference was found ($t = -.029$, $df = 464$, n.s.).

When testing for differences in spending habits of money received from parents (either pocket money or allowance) and money earned, results showed that for those who have earnings and at the same time receive pocket money, significantly more money received from parents was spent than money earned ($t = 4.779$, $df = 291$, $p < .001$, two-tailed).

Temptation inhibiting strategies

The answers given were categorised. This revealed both behavioural and cognitive approaches to the temptation problem. The majority of the students (69.6 percent) put money somewhere out of reach or sight or used one or other of their parents as piggy banks. Examples are 'leave money or cash card at home', 'give it to mum or someone else', 'hide money and forget about it', 'make my mum put it in my bank account'. In the following, these strategies are considered 'behavioural' strategies. There was a small group of students (13.2 percent) who reported the use of willpower and cognitive strategies to resist spending. Examples are 'limit myself, use self-control, try to budget' and 'concentrate on the target and spending consequences'. These strategies are considered 'cognitive' strategies. A new variable ('strategy') was defined to distinguish between students according to their use of strategy. Students who reported using behavioural strategies were given the score '1', students who reported using a mixture of behavioural and cognitive strategies were given the score '2', and students who reported using cognitive strategies were given the score '3'. Sixty-six students (14 percent) did not reply to this question and therefore were coded as missing cases.

There was no significant effect of ‘year’ ($F_{4,389} = 0.082$, n.s.) or ‘strategy’ ($F_{2,389} = 2.801$, n.s.) when testing for someone’s ‘general tendency to save’.

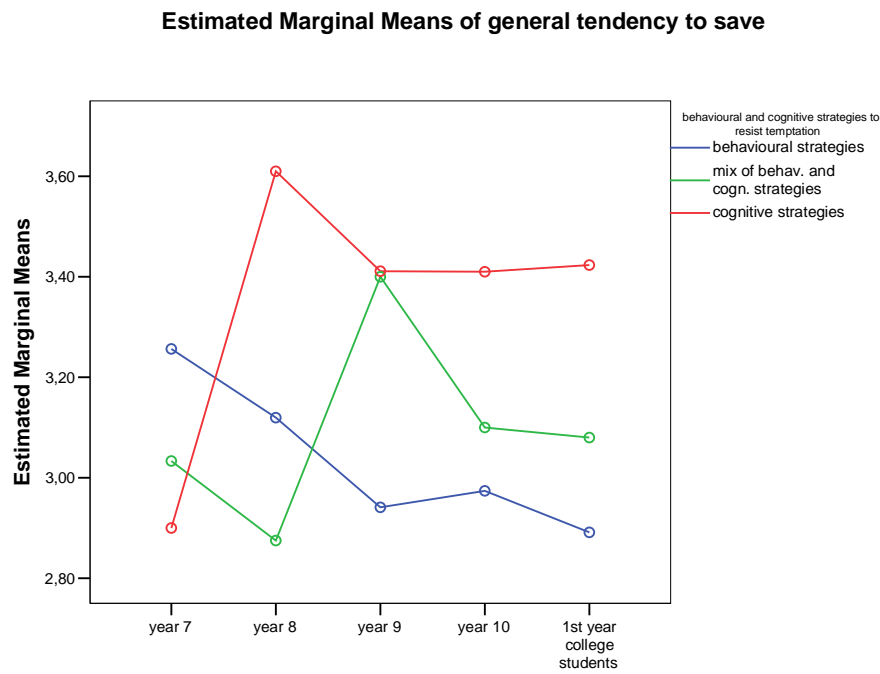


Figure 4.1 *General tendency to save as a function of ‘year’ and ‘strategy’*

However, the graph above shows that younger students who generally tend to save, make more use of behavioural strategies than of cognitive strategies or a mix of cognitive and behavioural strategies, while older students who generally tend to save, mostly apply cognitive strategies.

The importance of saving during adolescence

Strategies for getting larger sums of money

Table 4.2 shows the mean scores of all students together for their choices regarding a strategy for getting larger sums of money. On average, students scored highest on ‘start saving’, followed by ‘ask parents / step-parents for more money and pay them back later’. The measures are ordered from ‘would certainly do this’ to ‘would certainly not do this’.

Table 4.2 *Average likelihood of choosing a way of getting larger sums of money*

| Way of getting larger sums of money | Mean | S.D. |
|---|------|------|
| start saving | 5.30 | 1.59 |
| ask my parents / step-parents for more money and pay them back later | 4.80 | 1.80 |
| calculate how long it would take me to save up for it | 4.49 | 1.85 |
| stop spending money on some of the things I usually buy | 4.46 | 1.56 |
| do more work at home in order to earn some extra-money | 4.24 | 1.84 |
| take on a Saturday-job or a paper-round | 4.09 | 2.00 |
| ask parents/step-parents whether they would buy it for me | 4.03 | 1.70 |
| try to negotiate with my parents / step-parents | 4.00 | 1.76 |
| go out / into town less often | 3.99 | 1.66 |
| think about my savings and whether I would want to dig into them | 3.92 | 1.66 |
| buy cheaper things | 3.72 | 1.71 |
| ask for more shifts at work | 3.64 | 2.15 |
| sell toys and things I could do without at a car boot sale | 3.06 | 1.84 |
| sell things (i.e. toys, game boy, mobile phone, etc.) to a second hand shop | 2.55 | 1.65 |
| sell things (i.e. toys, game boy, mobile phone, etc.) to friends | 2.53 | 1.73 |

Note: Scores ranged from 1: 'Would certainly not do this' to 7: 'Would certainly do this'.

Of the items included to tap into 'adjusting expenditure', the strategies 'stop spending money on some of the things I usually buy' and 'go out/ into town less often' were chosen above 'buying cheaper things'.

Structure

Considering the inclusive nature of saving and adjusting expenditure, a confirmatory factor analysis (rotation method: Varimax) was performed and four factors were selected (see Table 4.3). The four factors together explained 37 percent of the variance. Factors 1 and 2 each explained 11 percent and the Factors 3 and 4 each explained 7.5 percent of the variance. Items loading on Factor 1 are all related to selling. Items loading on the Factor 2 tap into saving by adjusting expenditure. Items designed to assess students' likelihood of relying on parents loaded on Factor 3 together with an item about taking money out of a bank account. Since this item can be considered representing 'dissaving' rather than 'saving', it is reasonable that it

belongs to a factor other than saving by adjusting expenditure. In addition, getting money out of an existing bank account is a rather quick way of getting larger sums of money, just like negotiating with parents or asking them for more money could be. Items loading on Factor 4 are related to working outside home.

Table 4.3 *Factor structure of the ways of getting larger sums of money and item loadings*

| Getting larger sums of money items | sell things | saving by adjusting expenditure | negotiate, borrow, dissave | work outside home |
|--|-------------|---------------------------------|----------------------------|-------------------|
| ask parents/step-parents whether they would buy it for me | | | 0.626 | |
| go out / into town less often | | 0.417 | | |
| think about my savings and whether I would want to dig into them | | | 0.383 | |
| try to negotiate with my parents/step-parents | | | 0.606 | |
| sell things (i.e. toys, game boy, mobile phone, etc.) to friends | 0.691 | | | |
| start saving | | 0.559 | | |
| take on a Saturday-job or a paper-round | | | | 0.769 |
| ask for more shifts at work | | | | 0.539 |
| do more work at home in order to earn some extra-money | | | | |
| stop spending money on some of the things I usually buy | | 0.599 | | |
| sell toys and things I could do without at a car boot sale | 0.588 | | | |
| calculate how long it would take me to save up for it | | 0.559 | | |
| buy cheaper things | | 0.441 | | |
| sell things (i.e. toys, game boy, etc.) to a second hand shop | 0.787 | | | |
| ask my parents/step-parents for more money and pay them back later | | | 0.426 | |

Extraction Method: Maximum Likelihood.

Rotation Method: Varimax with Kaiser Normalization.

Is there a preferred strategy?

Comparing ‘saving by adjusting expenditure’ to ‘sell things’, ‘negotiate, borrow, dissave’ and ‘work outside home’, it becomes clear that ‘saving by adjusting expenditure’ is as important as ‘negotiate, borrow, dissave’ until the age of 15 and becomes even more important when in college. As of Year 9, when students are approximately 14 years old, working outside home is an option that is chosen more frequently too. This is illustrated in the graph below.

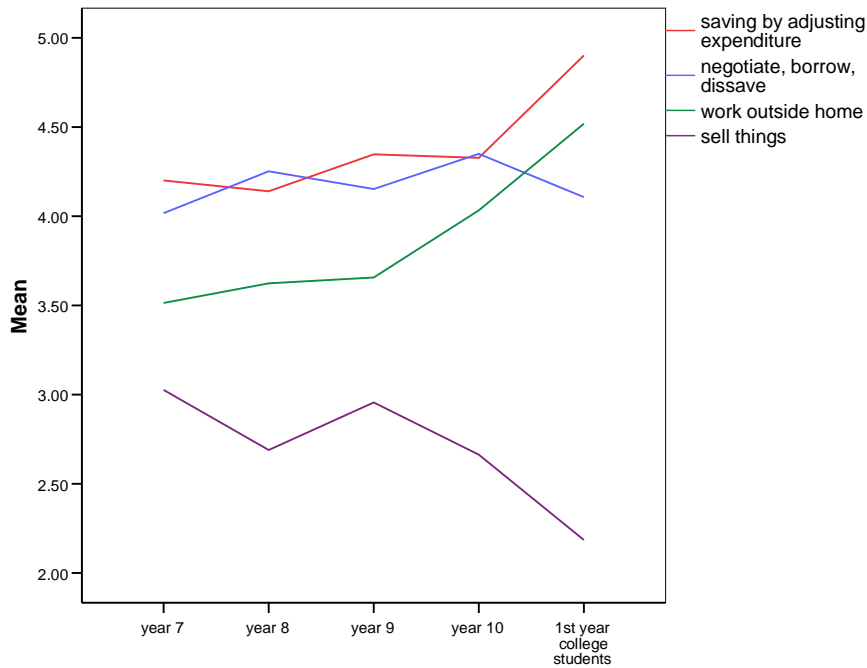


Figure 4.2 *Getting larger sums of money throughout adolescence*

Looking at the two most preferred strategies gives rise to the question of whether one could distinguish two groups of students: those who solve the income constraint problem by themselves (i.e. through saving by adjusting expenditure) and those who do so by relying on others (by negotiating with parents and borrowing).

Who considers saving?

In order to establish characteristics of students who choose to save by adjusting expenditure when faced with an income constraint problem, first, correlations were run between the saved factor scores of Factor 2 ('saving by adjusting expenditure') and the other variables that were included in the questionnaire. This was also done for the measure 'negotiate, borrow, dissave' (saved factor scores of Factor 3).

Table 4.4 *Correlations between the two most preferred strategies and potentially related variables*

| Correlations | saving by adjusting expenditure | negotiate, borrow, dissave |
|---|---------------------------------------|----------------------------------|
| Year (students from year in school) | 0.225** | 0.011 |
| Income (standardized per year group) | -0.068 | -0.024 |
| Can you spend your money as you wish? (freedom) | -0.021 | 0.118* |
| Do you usually know beforehand what you are going to buy when you go to a shop? | 0.080 | -0.010 |
| I like spending money. | -0.205** | 0.238** |
| There are a lot of things I want. | -0.030 | 0.190** |
| I usually give into temptation. | -0.173** | 0.248** |
| Strategies to resist temptation (high scores = cognitive) | 0.128* | -0.036 |
| General tendency to save | 0.355** | -0.234** |

** Correlation is significant at the 0.01 level (2-tailed).

* Correlation is significant at the 0.05 level (2-tailed).

For five of the nine measures the relationship with ‘saving by adjusting expenditure’ was significant but low in magnitude. Students who generally tend to save rather than spend money seem to be more inclined to choose to save by adjusting expenditure when trying to get larger sums of money. In addition, age and the use of cognitive strategies to resist temptation were positively associated with this measure.

For five of the nine measures the relationship with ‘negotiate, borrow, dissave’ was significant. Again, correlations were low in magnitude but the set of significant variables was slightly different and this time, the strongest relationship was found for ‘I usually give into temptation’. Students who tend to rely on others seem to give into temptation easily and in general like spending. They also report wanting a lot of things and having more freedom with regard to their spending.

In a second step, multiple regression analyses were carried out. This was done to explore the relative importance of demographic (year, gender, income) and money management variables for the perceived likelihood of ‘saving by adjusting expenditure’ and ‘negotiate, borrow, dissave’. Nine independent variables were entered simultaneously. These were: year, gender, income (standardized), ‘general tendency to save’, use of temptation inhibiting strategies (with dummies) and two money management items. The table below shows the results of these regressions. The variable ‘behavioural strategies’ was excluded.

Table 4.5 Results from the two multiple regression analyses

| Independent variables | Dependent variables | | | negotiate, borrow, dissave | | |
|---|---------------------|--------------|-------------|----------------------------|--------------|-------------|
| | Beta | t | Sig. | Beta | t | Sig. |
| (Constant) | | -5.475 | .000 | | -1.831 | .068 |
| Year | .296 | 6.089 | .000 | .000 | -.001 | .999 |
| Gender | -.040 | -.825 | .410 | .044 | .830 | .407 |
| Income (standardized per year group) | -.026 | -.525 | .600 | .021 | .394 | .693 |
| General tendency to save ('saving scale') | .394 | 7.046 | .000 | -.086 | -1.410 | .159 |
| Cognitive strategies | .057 | 1.164 | .245 | .022 | .410 | .682 |
| Mix of behavioural and cognitive strategies | .057 | 1.193 | .234 | .083 | 1.594 | .112 |
| I like spending money. | -.043 | -.829 | .408 | .158 | 2.797 | .005 |
| I usually give into temptation. | .080 | 1.484 | .139 | .156 | 2.654 | .008 |

'*Saving by adjusting expenditure*' The regression was significant: $F_{8,337} = 13.267$, $p < .001$, $R^2_{adj} = .22$. The variables age and spending behaviour had a significant impact on the perceived likelihood of choosing to save. The older a participant and the less money he or she spends in general, the more likely it is that the person chooses to save when trying to get larger sums of money.

'*Negotiate, borrow, dissave*' The regression was a poor fit ($R^2_{adj} = .08$) but the overall relationship was significant ($F_{8,337} = 4.780$, $p < .001$). The variables 'I like spending money' and 'I usually give into temptation' had a significant impact on the perceived likelihood of choosing to 'negotiate, borrow, dissave'. The more a participant likes spending money and the easier he or she gives into temptation, the more likely it is that the person chooses to borrow, to get more money out of parents or to take money out of an existing bank account.

4.2.4 Discussion

This first study has shed considerable light on the role saving plays in alternative ways of getting larger sums of money while young.

Monthly income

Most students (at least 80 percent) in Year 7 up to Year 10 receive pocket money (or an allowance) and activity money. This drops to about 50 percent for college students. When looking at part-time jobs or Saturday jobs, one finds that about 85 percent of the students in Year 7 are not employed while 85 percent of the students in college are. The finding that older adolescents are less likely to receive an allowance than younger adolescents is in line with the findings of Mangleburg and Brown (1995) and Leiser and Ganin (1996). It seems that some of the parents of the older adolescents stop giving pocket money because the adolescent is earning his or her spending money. It is possible that they do this to encourage economic independence through part-time work as suggested by Leiser and Ganin. On the other hand, it could also be that they stop giving money to their earning adolescent because there is simply not enough money in the household to provide for an allowance on top of money earned. However, on average, older adolescents seem to receive higher amounts from their parents than younger adolescents, indicating that the parents who still give allowances anticipate that a 17-year-old has more expenses than a 14-year-old.

In total, around 40 percent of the students had out of school-hours employment for which they were paid. This is less than the percentage of working students in the study by Doss et al. (1995), where over 50 percent of school children between 10 and 15 years of age, were earning money. However, when looking at income received from either other people (through small jobs for people other than parents) or from employment, one finds that in the current study, on average, the proportion of students aged 16 to 18 who are not working outside the home is relatively low (16 percent). While it is questionable whether it makes sense to compare this percentage with the findings by Goszczyńska (1996) in Poland, where a high percentage (47 percent) of young people had no additional source of income, it is worth noting that Goszczyńska considered the Polish school programmes overloaded, which would not leave students with time for paid work. The high percentage of students in college with paid work in the UK (Devon) suggests that school workload might not be such an issue when it comes to earning extra income.

General money management

While Hollister et al. (1986), Doss et al. (1995), and Warnaar and Van Praag (1997) all found that those with earnings reported more saving than those without earnings, in this study, there was no difference between those with and without any out of school-hours employment when looking at someone's general tendency to save rather than spend money. This suggests that someone's general tendency to save is not influenced by someone's earnings, which suggests that a closer look at other (psychological) variables should provide us with a better understanding of what constitutes and facilitates careful money management during adolescence. Bear in mind that the general tendency to save measure is likely to tap into saving as a habit.

The finding that girls compared to boys scored lower on the 'saving scale' is in line with the results of Leiser and Ganin (1996) and Furnham and Thomas (1984a), who found that boys reported saving larger sums of money than girls. Lunt and Livingstone (1991) also found that men had more savings than women. However, in Lea, Unrath, Wilde, and Wynia's study (1999), females were more likely to save than males. Arguably, a score on a 'general tendency to save' scale can not easily be compared with an amount of money claimed to be saved. From the data collected so far, it remains unclear what constitutes the difference in general tendency to save between boys and girls. In the following studies, more light will be shed on this finding, when other variables are taken into account.

The significant difference between the usage of money unconditionally received from parents and money earned suggests that adolescents (like adults) treat money from different sources differently. In Chapter 1, it has been explained that the idea that people assign certain activities to specific accounts is referred to as mental accounting (Thaler, 1999). Mental accounting influences spending choices. In the current study, students spent money received from parents more easily than money earned. Here, two regular income streams are compared. The income measure also included money earned from small jobs done for one's parents. This means that the difference is between money received freely (without strings attached) and money received in exchange for work (even if paid by parents). When children are as young as six or seven, pocket money is usually considered as spending money by their parents (Lassarre, 1996; Baele & Vlerick, 2000). As a result, adolescents might still

think of their pocket money or allowance in terms of spending money. Thus, the conception that the difference found provides evidence for mental accounting during adolescence should be treated with caution, since it remains unclear whether the difference really reflects a distinction made by the students themselves (although the differences found are logical).

Temptation inhibiting strategies

The difference in the use of temptation inhibiting strategies by students in Year 7, 8, and 9 can be interpreted in terms of general processes of cognitive development. The majority of the students in Year 7 seem to recall behavioural strategies while the majority of the students in Year 8 and higher reported the use of cognitive strategies or a mixture of behavioural and cognitive strategies. This shows that after some time of trial and error, a large part of the older students seems to have settled to the use of cognitive strategies. The changes in strategy-use between Year 7 and 9 could reflect a try-out period during which adolescents are testing various strategies before discovering which ones work best for them.

A trend from behavioural to cognitive strategies with an increase in age has also been found by Sonuga-Barke and Webley (1993). Within the scope of their experimental study, they also investigated children's understanding of temptation in greater detail by a series of questions at the end of the game. The replies of the younger ones clearly involved behavioural strategies (i.e. moving to a different location to forget about the temptation or to get distracted) while the strategies used by 12-year-olds all involved thinking (for example 'I would close my eyes and think about all different things'). In the current study, the youngest students were 11 years old and they clearly favoured behavioural strategies. However, also among the oldest group of students there were students who solely reported the use of behavioural strategies. This shows that for some students in college behavioural strategies seem to work best. It is possible that, to start with, the use of cognitive strategies to resist temptation depends on cognitive development but then, in a second step, after a period of trial and error, the use of cognitive strategies depends on personal preferences for what works best for oneself.

The importance of saving during adolescence

The investigation of saving in relation to working, selling, and relying on parents has revealed that young people between the ages of 11 and 18 do think of saving as a possible way of getting hold of larger sums of money, but until the age of 15, approaching one's parents seems to be of similar importance. This could be a sign that saving is more bound up with the relationship to one's parents before the age of 15 than after. In this first study, no data were collected that would allow us to draw conclusions about the role of the parents in this. One could imagine that students who ask their parents for financial short term support might have more approachable parents. The option 'work outside home' becomes more important than relying on parents after the age of 16. However, it is still unclear what the role of the parents is in this. That is, whether the parents of the students in the study simply allowed or really encouraged their child to work out of school hours.

The study demonstrates that across all age groups, participants seem to be aware that saving helps to accumulate funds. In addition, one can see that until the age of 15, saving is as important as asking parents for financial short-term support and more important than working (outside home) and selling. Older students consider saving above all other means of getting larger sums of money, with working being also more important than parental support. This latter result is not too surprising. College students might feel increasingly independent and therefore less often consider asking parents. This in combination with the fact that the amount of money they can earn in a week by working goes beyond the average monthly contribution from parents. Working might also become increasingly important because college students are likely to have more expensive saving goals (i.e. computer, driving licence, first car). This is something that will be addressed in the next Chapter.

The fact that the two top strategies were 'saving by adjusting expenditure' and 'negotiate, borrow, dissave' shows that when young, these strategies are the most popular alternatives when it comes to getting larger sums of money. It indicates that as a strategy for dealing with an income constraint problem, 'saving by adjusting expenditure' is of equal importance as approaching parents for short term financial support. The study has successfully demonstrated the relative importance of saving

during adolescence when other ways of getting larger sums of money are taken into account. The finding that across all ages adolescents do have saving as a realistic option in their mind, underscores the investigation of saving during adolescence in depth.

Characteristics of adolescent savers and those who rely on their parents

The last part of the analysis was used to distinguish between adolescent savers and non-savers, as well as between those who rely on their parents and those who don't. The regression results for 'saving by adjusting expenditure' indicated that students who generally tend to save consider this option more easily than others. That is, choosing to save seems a close option for those who are used to economising and budgeting, when confronted with an acute income constraint problem. It is possible, that those who generally tend to save, find saving easier than those who generally tend to spend their money quickly. This means that they might be better equipped for 'saving by adjusting expenditure' and as a result they choose this option more frequently. The regression results further highlight that psychological variables such as to what extent one enjoys spending or how easily one gives into temptation (i.e. self-control) are likely to influence whether someone chooses to save or to rely on one's parents. The significant predictors 'I like spending money' and 'I usually give into temptation' for the option 'negotiate, borrow, dissave' suggest that students who ask their parents for support might be less patient than students who choose to save. This is in line with the findings of Lunt and Livingstone (1991), who reported that savers were less likely to spend whenever they felt like it, whereas non-savers tended to shop around. In their study, savers tended to have higher incomes, while in the present study, the regression result showed that income had no significant impact on 'saving by adjusting expenditure'. The fact that adolescents more often consider 'saving by adjusting expenditure' as they grow older, is consistent with the findings of Furnham and Thomas (1984a). The data also show that this shift is not the result of older students having a higher income.

It could be that this finding is brought about by the questions that were used to tap into discretionary rather than residual saving in combination with the instruction that students had to think of an amount higher than what their monthly income was.

Through the description of an amount that is related to everybody's income in the same way, the task should have been equally difficult for adolescents regardless their income level. That those who less easily give into temptation are those who are more likely to choose to save (by adjusting expenditure) testifies that the method used to investigate discretionary saving seems to have worked. Had the measure tapped into effortless residual saving due to a surplus of income, income would have been the most important predictor. This shows that the questions used to investigate discretionary saving seem to have worked well. The study showed that although saving is an option for adolescents, it does not seem to be easy, as it requires the use of some kind of temptation inhibiting strategies (i.e. self-control).

4.3 Summary

In sum, the findings of this first study suggest that during adolescence, saving is a meaningful option for getting larger sums of money. The attempt to describe characteristics of savers and non-savers generated valuable information about the importance of money management skills and psychological variables (self-control) for the saving choices of adolescents. That is, for adolescents, saving does not seem to be easy. For a better understanding of adolescent saving, the relative importance of demographic, economic and psychological variables should be investigated more in depth. In addition, the results support the intention that a consideration of the social context of the family, where money management decisions are negotiated, will provide us with valuable information about the development of saving behaviour in a wider context than has been done so far.

Chapter 5 - The Importance of Psychological Variables for Adolescent Saving

5.1 Introduction

The first study has shown that saving is important to young people as a means of getting larger sums of money. Those students who chose to save described themselves as people who tend to save money in general. The ‘general tendency to save’ measure¹¹ was designed to find out whether a young person is best described as a saver or spender (non-saver). This composite measure will be used in the following study to look in more depth into adolescents’ saving behaviour.

The next study has a number of aims. The main aim is to investigate which measures help us best understand and predict saving during adolescence. In Study 2, answers to the following questions will be sought:

- (1) How well can we predict a young person’s general tendency to save rather than spend money from socio-economic variables (age, gender, income) alone?
- (2) What is the benefit of including information about someone’s level of conscientiousness, future time perspective, various behavioural preferences and perceived difficulties (whether the adolescent likes spending a lot or finds it difficult to resist temptation), as well as information about the adolescent’s saving attitudes and motives?

Not only will the overall predictability of someone’s general tendency to save be looked at, but particular attention will be paid to psychological and behavioural measures that might help us better understand the processes that are involved with saving while young.

¹¹ See Chapter 4, paragraph 4.2.1

Furthermore, saving motives that matter to young people will be examined. The motives identified by Keynes (1936) and Lindqvist (1981) will be taken as a starting point to investigate the importance of these motives during adolescence. As introduced in Chapter 1 (paragraph 1.4.1), Wahlund and Wärneryd (1987) used the saving motives identified by Lindqvist to develop a model of saver groups. The groups are characterised by a dominant motive, resulting in a classification of people as wealth managers, goal savers, buffer or security savers, and cash managers. According to Jundin (1988), most adolescents would belong to the group of goal savers, since in her interview study, she found that between the ages 13 and 18, the most important saving motive was related to short-term consumption goals. Furthermore, 30 percent of the participants in her study stated that they saved because it gave them a feeling of security. Although such a saving reason suggests that they might engage in precautionary saving, it could also reflect their need to manage their cash. In addition, in Jundin's study, a small group referred to saving for future consumption goals. Saving for future needs was also reported to be relevant for some of the older participants of the study conducted by Furnham and Thomas (1984a). According to Roland-Lévy and Hervé (1999), saving for the future is important for young adults in France. The working students (who had higher incomes) tended to save as much as possible for the future, 'in case there is a problem later'. In other words, they were saving for a buffer. Apparently, those with work were thinking ahead more and they seemed to aim for providing for a buffer independently (as opposed to relying on their parents as a buffer). In the following study, nine saving motives will be investigated with regard to their importance during adolescence. Based on the research by Jundin (1988), the notion that the attainment of independence is one of the central themes of adolescent development (Coleman & Hendry, 1999), and on the understanding that adolescents have their parents as a buffer in the background, the following hypothesis has been formulated:

H1: It is hypothesised that for adolescents, (a) the saving motive 'goal saving' will be the most important saving motive, (b) the saving motive 'independence' will be one of the most important saving motives and (c) the saving motive 'precaution' will be of minor importance to them.

There is some evidence that most people in Western economies have positive attitudes towards saving (Lea, Tarpy, & Webley, 1987; Wärneryd, 1991). Saving attitudes are assumed to be connected and deeply rooted with upbringing and life style (Ölander & Seipel, 1970). However, little is known about the attitudes of young people towards saving and how these attitudes develop over time. Therefore, this study will be used to shed more light on the saving attitudes of adolescents. That is, the next variable that will be investigated concerns a 'saving attitude scale' that has been developed by means of Pilot Study 2. Through this Pilot Study (the questionnaire is presented in Appendix 2), an initial number of 66 attitude items was reduced by half. A factor analysis revealed five subscales: 'struggle', 'saving as something that is good', 'pride', 'dependency on parents', and 'parents as guides'. In the interview study by Roland-Lévy (1995), adults reported that they perceive saving as difficult. She studied the financial behaviour of adults to classify people accordingly. The responses given, centred on the experience of saving as something that is hard, difficult and necessary. Those difficulties however were mainly expressed by participants in the low and intermediate salary group. This raises the question whether there is a relationship between someone's experienced difficulties with saving and someone's level of income. Research that has reported an increase in positive attitudes towards saving behaviour with age is the study with 16- to 21-year-olds by Furnham and Goletto-Tankel (2002). Their results showed that older and more educated participants had more positive attitudes towards saving behaviour as measured by 14 attitude items. The factor analysis of their attitudes towards saving scale revealed four factors: saving behaviour, saving ethic, confusion and anxiety, and negative inhibition. Age predicted positive attitudes towards saving behaviour, beliefs about pensions and a need for life assurance: the older the participant, the more positive their attitude. It is therefore possible that in the following study, older students also hold more positive attitudes than younger students. However, since to date, not much is known about the saving attitudes of young people, the main aim of this investigation will be one of description. Study 2 will be used to explore developmental changes in saving attitudes and potential relationships between saving attitudes and saving behaviour during adolescence. Based on the above research and the results of Study 1 (where students who considered relying on their parents

seemed rather impulsive with high scores on ‘I like spending’ and ‘I usually give into temptation’), the following hypotheses¹² are put.

H2: It is hypothesised that there will be (a) a negative association between age (‘year’) and the attitude subscale ‘dependency on parents’, (b) a positive association between ‘I like spending money’ and the attitude subscale ‘dependency on parents’, and (c) a positive association between ‘I usually give into temptation’ and the attitude subscale ‘dependency on parents’.

Saving means, as a rule, that consumption is postponed for future spending (Wärneryd, 1999). This means that in order to save, someone needs to notice, that sometime in future, money might be needed for spending one would want to provide for in advance. For that reason, people’s time horizons have been investigated in relation to saving behaviour (Julander, 1975; Wärneryd, 1996; Nyhus, 2002). Furthermore, saving has been studied in relation to someone’s ‘future time perspective’ (Webley & Nyhus, 2006) as well as the measure ‘consideration of future consequences’ (Daniel, 1997). Future time perspective has also been shown to be related to a greater willingness to defer gratification (Lessing, 1968).

H3: Based on the above findings, it is expected that in adolescence, (a) ‘general tendency to save’ and ‘future time perspective’ are positively associated, and (b) ‘general tendency to save’ and ‘consideration of future consequences’ are positively associated.

The next measure that will be considered is the personality dimension conscientiousness (being disciplined, easily worried, and sticking to one’s principles), which has been shown to be related to saving and financial wealth in adults (Schmolders, 1966; Brandstätter, 1996; Nyhus, 2002). In her research, Nyhus (2002) found that conscientiousness was associated with positive saving attitudes. In addition, she found that conscientiousness was positively correlated with financial and total wealth, while Wärneryd (1996) found that conscientiousness was associated with financial self-control.

¹² Please note that the evidence is rather limited and therefore, these hypotheses are exploratory out of necessity.

H4: In adolescence, 'general tendency to save' will be positively associated with the level of conscientiousness.

Study 2 will also provide further insights into the use of saving tactics during adolescence. Whether someone chose to save by adjusting expenditure in Study 1 seemed to be related to that individual's use of cognitive as opposed to behavioural strategies to resist temptation. We don't know yet how young people figure out what works for them and what the strategies are they apply when trying to save in real life. So in Study 2, the tactics young people use to prevent them from spending too much when trying to save up as identified in Study 1, will be taken as a starting point to investigate the use of saving tactics more in depth. Based on the finding that older children more often than younger children reported the use of cognitive strategies when dealing with temptation (Sonuga-Barke & Webley, 1993), and on the fact that during adolescence, cognitive abilities increase in general (Orr, Brack, & Ingersoll, 1988), the following hypothesis has been formulated:

H5: It is expected that with an increase in age, also an increase in the use of cognitive strategies will be found.

The second study sets out to provide detailed information about why young people save and what their attitudes towards saving and their strategies for saving are. The study will then be used to explore the relationship between adolescents' general tendency to save and the psychological variables conscientiousness, time perspective, and reference group, as well as the use of saving strategies. Developmental changes will be addressed first and the formulated hypotheses will be tested. Consequently, Study 2 will be used to test for the effect of socio-economic variables (age, gender, and income), selected psychological variables (conscientiousness, time perspective, reference group) and behavioural variables (use of saving strategies) on adolescents' saving behaviour. Multivariate analyses will be used to identify how these variables affect the overall increase in saving with age. In this regard, the following is hypothesised:

H6: In adolescence, psychological and behavioural measures will contribute significantly towards explaining variance in saving (as measured by someone's

‘general tendency to save’), over and above the variance explained by socio-economic variables.

5.2 Study 2

5.2.1 Participants

Two hundred and ninety students from two colleges (Exmouth Community College and Clyst Vale Community College) and three different age groups (‘year’ in school) took part in the study. The fact that all participants were going to a school that has students from the age of 11 up to 18 means that they don’t have to change school in order to continue education after the age of 16. Unlike in Exeter, where students leave high school in order to go to college, community college students all stay in the same learning environment (with their friends) and are expected to still live at home.

Table 5.1 *Socio-economic information for participants by ‘year’ in college (N = 290)*

| Community College | N | Average age (in years) | Gender | | Average income (in £) | |
|---------------------|-----|------------------------|--------|--------|-----------------------|--------------|
| | | | Male | Female | Pocket money | Money earned |
| Year 8 (12.73 yrs) | 104 | | | | | |
| Clyst Vale | 42 | 12.75 | 21 | 21 | 27.61 | 24.64 |
| Exmouth | 62 | 12.71 | 25 | 36 | 22.15 | 27.18 |
| Year 10 (14.81 yrs) | 82 | | | | | |
| Clyst Vale | 41 | 14.85 | 18 | 23 | 34.09 | 74.01 |
| Exmouth | 41 | 14.78 | 17 | 24 | 25.78 | 60.12 |
| Year 12 (16.78 yrs) | 104 | | | | | |
| Clyst Vale | 57 | 16.88 | 30 | 27 | 35.89 | 146.34 |
| Exmouth | 47 | 16.66 | 18 | 29 | 45.7 | 173.38 |
| Total | 290 | 14.81 | 129 | 160 | 30.54 | 96.32 |

5.2.2 Materials

Students completed a four-page anonymous questionnaire (see Appendix 3) that consisted of five parts. Most of the questions were developed based on the results of

two pilot studies. The questionnaire started with some background questions about students' age and gender, their monthly income, general spending behaviour and use of saving tactics. Students had to provide information about their attitudes towards saving, complete the conscientiousness part of Brandstätter's 16PA (Brandstätter, 1988, amended) and evaluate 33 items about saving motives (piloted for comprehensibility and coherence) according to importance. Two questions on parents as money management examples, as someone to talk to about general money matters, and on best friends as someone to compare oneself with, were included, as well as the Zimbardo future and present (hedonistic) time orientation inventory (Zimbardo & Boyd, 1999). Among the time orientation items an additional six items of my own devising were mixed. These items tapped into the planning behaviour of the students. The questionnaire finished with a short version (eight items) of the Consideration of Future Consequences instrument (Strathman, Gleicher, Boninger, & Edwards, 1994) that had been validated by Petrocelli (2003).

Measures

General tendency to save rather than spend money

The 'saving scale' developed and employed in Study 1 was also used in Study 2. The higher one's score on this measure, the more likely one is to save money and spend it carefully (N = 271, alpha = .66).

Temptation inhibiting strategies

In Study 1, as a result of using an open question, students provided an initial set of 17 tactics to stop themselves from spending too much when saving up for something. In Study 2, students were presented with statements of the tactics and asked to evaluate them according to the likelihood with which they would choose to use either of them. The options presented ways of stopping yourself from spending too much when saving up for something resulted all from Study 1. They can be considered important in real life situations to students of the age groups studied (ecologically valid). Results of Study 1 suggested a distinction between cognitive and behavioural

strategies. To further investigate tactics that go together ('tactic-packages'), a 7-point scale was used.

Saving attitudes

The 'saving attitude scale' consisted of 30 items (see Appendix 4). The subscales were: 'struggle' (saving is perceived as something that is hard and difficult to manage), saving as something that is good ('saving is a good thing'), saving as a new skill one can be proud of ('pride', pride as an emotional response to an evaluation of one's competence, Harter, 1982, 1985), saving as something that is not necessary ('dependency on parents'), and saving as something your parents can help you with ('parents as guides'). In Pilot Study 2, the alpha reliability estimates were in the ranges of .67 to .78. In this study, the estimates for this instrument were in the ranges of .66 to .78 (Ns varied between 268 and 277).

Saving motives

The saving motives 'goal saving', 'independence', 'enterprise', 'cash management', 'pride', 'calculation', 'precaution', 'avarice', and 'foresight' were considered potentially relevant to young people between the ages 11 and 18. They were each represented by a minimum of two and a maximum of six items (33 items¹³ in total). The motive items were tested for salience with a 5-point scale from 'not at all important' to 'extremely important'.

Past and present saving

In order to get information about past saving and present saving, two blocks of the DNB Household Survey questionnaire (Camphuis & Ketelaars, 1995, amended for use with adolescents) were included. These were:

¹³ These items were the result of Pilot Study 1 (N = 167, aged 11-18), where an initial set of 36 motive items was tested for relevance and appropriateness of wording.

Have you ever tried saving up for anything? (yes, no)

What was the most expensive thing you ever bought from money you had saved?

I bought _____

How much did it cost? £ _____ .

How long did it take you in total to save this much money? _____ weeks.

Are you saving up for anything at the moment? (yes, no)

What are you saving for? I am saving for _____ .

How much will it cost? £ _____ .

How long will it take you in total to save this much money? _____ weeks.

Conscientiousness

The instrument devised by Brandstätter (1988) to measure conscientiousness among other personality traits was used in a slightly amended way. The adjectives from the original scale had been translated and simplified for use with young people between the ages 12 and 16. In the original version, Brandstätter used a 7-point scale. Results of Pilot Study 3¹⁴ (see Appendix 10 for the questionnaire of Pilot Study 3) showed that the use of the original labels did not work with children as young as 12. To keep the task as simple as possible, the scale was therefore used without labels and the section started with a small explanatory introduction instead:

I would also like you to describe yourself using the opposites below. Each line contains one pair of opposite qualities. Tick one circle on each line that YOU think best describes you on that scale. For example, if you think you are easily worried, tick the circle at the very left that's close to this quality. And if you think you are more carefree than anxious, tick a circle on that row, near the right hand side closer to the quality carefree. Make sure you tick one circle on EACH line.

Present-hedonistic and future time orientation

Most of the 10 items loading highest on the factor future time perspective and the eight items loading on the factor present-hedonistic time perspective (Zimbardo &

¹⁴ Pilot Study 3 was conducted with 111 students aged 12 to 16 and used to pilot the measures 'conscientiousness', 'future time perspective', 'present (hedonistic) time perspective', 'consideration of future consequences', and to examine whether the saving strategy items selected can be used with a 7 point scale (1: would certainly not do this, 7: would certainly do this).

Boyd, 1999) were re-phrased¹⁵ for use with people below the age of 16. Item 10 in the original scale for example reads ‘When I want to achieve something, I set goals and consider specific means for reaching those goals’. The amended adolescent-item reads ‘When I want to achieve something, I set goals and think about different ways of reaching them’ (see Appendix 11 for both the original and the items devised for use with adolescents). For reason of clarity, two of the original future time perspective items were used with an a- and b-version. An example is the original item ‘I meet my obligations to friends and authorities on time’ that became (a) ‘I do what I should do for friends in time’ and (b) ‘I do what I should do for teachers in time’. These changes resulted in twelve future time perspective items of which eight could be used as a suitable composite measure of an adolescents’ future time perspective (N = 247, alpha = .66). All eight items originally loading on the present (hedonistic) factor in the Zimbardo time perspective scale could be used in the amended form as a reliable measure of an adolescents’ present (hedonistic) time perspective (N = 262, alpha = .67).

Consideration of future consequences

Petrocelli (2003) has validated an eight-item short version of the 12 items that form the ‘Consideration of Future Consequences Scale’ (Strathman et al., 1994). These eight items were adapted¹⁶ for use with adolescents (see Appendix 12 for both the original and the items devised for use with adolescents). Students were asked to describe themselves by selecting one of five labelled choices (1: not at all like me; 2: not like me; 3: half like me; 4: like me; 5: very much like me). Seven of the eight items could be used as a reliable measure of an adolescents’ consideration of future consequences (N = 271, alpha = .80). The higher one’s score on the scale, the more one considers future consequences.

¹⁵ Nicky, a 14-year-old female student from Sidmouth College, UK, amended the items jointly with the researcher.

¹⁶ See footnote 14.

Planning behaviour

Six items were included to tap into a students' planning behaviour (example items were 'I usually think of birthday presents for my friends at least a week ahead.' and 'I'm a planner'). Of these, three could be used as a moderately reliable measure (N = 269, alpha = .61).

Need for money

For an estimation of how expensive someone thinks one's leisure activities are, three items were used to create a 'need for money scale' (N = 287, alpha = .74). A sample item was 'Activities I do in my free time usually involve spending money.'

Social comparison

Two items were used to tap into social comparison with regard to money received from parents and money earned.

Money talks and parents as examples

Four questions were included about the amount of money talk with mothers and fathers as well as about parents as money management examples.

5.2.3 Results

Apart from the adjectives included to measure conscientiousness, all instruments proved to be internally consistent (with alphas between .66 and .80). The psychometric properties of the conscientiousness instrument were sub-optimal (N = 281, alpha = .51). Nevertheless, the scale was used but its weakness should be noted when interpreting the results.

Students' income was standardized¹⁷ to allow for comparisons between low and high income groups regardless their age.

The two social comparison items that looked into how well-off students think they are compared to their best friends were kept separately because as in Study 1, students seemed to treat money from these two sources in a different way. Pocket money or allowances were spent more easily and much quicker than money earned ($t = 2.606$, $df = 139$, $p < .05$, two-tailed). Money earned is handled with more care.

Developmental changes

Saving motives

First, the frequencies in importance were calculated for the nine saving motives at different ages. Table 5.2 shows these frequencies for each 'year' group separately. When comparing the age groups, the differences in the order of importance between them were minimal.

Table 5.2 *The importance of various saving motives during adolescence by age*

| Year = 8 | Valid | Mean | Year = 10 | Valid | Mean | Year = 12 | Valid | Mean |
|-----------------|-------|------|-----------------|-------|------|-----------------|-------|------|
| goal saving | 103 | 3.16 | goal saving | 82 | 3.25 | goal saving | 104 | 2.93 |
| independence | 103 | 3.01 | avarice | 82 | 3.07 | independence | 104 | 2.82 |
| cash management | 103 | 2.85 | independence | 82 | 3.06 | foresight | 104 | 2.75 |
| precaution | 103 | 2.82 | foresight | 82 | 2.81 | cash management | 104 | 2.75 |
| avarice | 102 | 2.81 | precaution | 82 | 2.80 | precaution | 104 | 2.69 |
| foresight | 103 | 2.81 | cash management | 82 | 2.78 | avarice | 104 | 2.58 |
| calculation | 103 | 2.67 | pride | 82 | 2.57 | pride | 104 | 2.27 |
| pride | 103 | 2.64 | calculation | 82 | 2.45 | calculation | 104 | 2.12 |
| enterprise | 103 | 2.56 | enterprise | 82 | 2.15 | enterprise | 104 | 2.00 |

The most important saving motive throughout adolescence is goal saving. For students in Year 8 and Year 12, independence comes next. All students indicated that the least important motives for them were calculation, pride, and enterprise.

¹⁷ Since it was normally distributed, it was standardized per age group.

Precaution was found to be of medium importance across all three age groups. Increasing importance was found for ‘foresight’. This however is misleading. Although one might expect older students to be thinking further ahead than younger students, the foresight items designed for this particular study may also have been more meaningful to the older ones, by being related to goals nearer to them in future, such as saving money to pay for further education or a motorbike.

To explore whether someone’s saving motives are related to someone’s income (ability to save), the frequencies were also calculated for low, medium, and high income groups. Table 5.3 shows the order of importance of the nine saving motives for each income group separately. One can see that the order was almost the same when looking at the differences between the income groups.

Table 5.3 *The importance of various saving motives during adolescence by income-group*

| Low income | Valid | Mean | Medium income | Valid | Mean | High income | Valid | Mean |
|-----------------|-------|------|-----------------|-------|------|-----------------|-------|------|
| goal saving | 56 | 3.10 | goal saving | 164 | 3.13 | goal saving | 57 | 3.07 |
| independence | 56 | 2.98 | independence | 164 | 2.96 | cash management | 57 | 2.98 |
| avarice | 56 | 2.84 | foresight | 164 | 2.85 | independence | 57 | 2.97 |
| precaution | 56 | 2.74 | cash management | 164 | 2.79 | avarice | 57 | 2.89 |
| cash management | 56 | 2.62 | avarice | 164 | 2.76 | precaution | 57 | 2.87 |
| foresight | 56 | 2.61 | precaution | 164 | 2.75 | foresight | 57 | 2.85 |
| calculation | 56 | 2.45 | pride | 164 | 2.44 | pride | 57 | 2.80 |
| pride | 56 | 2.32 | calculation | 164 | 2.41 | enterprise | 57 | 2.46 |
| enterprise | 56 | 1.98 | enterprise | 164 | 2.27 | calculation | 57 | 2.42 |

It should be noted that cash management was more important for those with high income while precaution was slightly more important for those with low income.

Attitudes towards saving

To explore age and gender differences in students’ attitudes towards saving, ANOVAs were conducted on each attitude subscale. For the subscale that tapped into someone’s perception of difficulties with saving (‘struggle’), the ANOVA showed a significant effect of ‘year’ ($F_{2,283} = 4.262, p < .05$) and ‘gender’ ($F_{1,283} = 7.405, p <$

.01). Older students compared to younger students, and boys compared to girls associated saving with less difficulties. There was no effect of 'year' ($F_{2,283} = 1.945$, n.s.) and 'gender' ($F_{1,283} = 2.785$, n.s.) with regard to the subscale that tapped into saving as something that is (morally) good ('saving is a good thing'). Looking at saving as something to be proud of ('pride') the ANOVA showed a significant effect of 'year' ($F_{2,283} = 3.550$, $p < .05$). The Scheffé post hoc test revealed that the students from Year 10 were significantly more proud of saving than the students from 12. When looking at the attitude subscale that was best described as 'dependency on parents', the ANOVA showed a significant effect of 'year' ($F_{2,283} = 12.390$, $p < .01$). As was expected (hypothesis 2a), older students turned out to be less dependent on their parents. In addition, a significant main effect of 'year' was found for the attitude subscale 'parents as guides' ($F_{2,283} = 11.160$, $p < .01$). Younger students were more willing to seek parental advice on money management than older students. There was also a significant main effect of 'gender' ($F_{1,283} = 3.018$, $p < .05$). Girls reported accepting (and)/ or seeking parental advice on general money management more, more easily or more often than boys did. For completeness, Table 5.4 shows the correlations between the saving attitude subscales.

Table 5.4 *Correlations between saving attitude subscales*

| Correlations | 'struggle' | 'saving is a good thing' | 'pride' | 'dependency on parents' | 'parents as guides' |
|--------------------------|------------|--------------------------|---------|-------------------------|---------------------|
| 'struggle' | | | | | |
| 'saving is a good thing' | -0.550** | | | | |
| 'pride' | -0.184** | 0.386** | | | |
| 'dependency on parents' | 0.456** | -0.530** | -0.075 | | |
| 'parents as guides' | 0.115 | 0.057 | 0.292** | 0.167** | |

** Correlation is significant at the 0.01 level (2-tailed).

As was expected (hypothesis 2b), there was a significant positive relationship between the attitude subscale 'dependency on parents' and someone's score on the item 'I like spending money' ($r = .175$, $p < .01$) as well as between the attitude subscale 'dependency on parents' and someone's score on the item 'I usually give into temptation' ($r = .438$, $p < .01$). Less patient adolescents who generally like spending money seem to depend on their parents more (hypothesis 2c).

Exploring the relationship between perceived difficulties with saving (attitude subscale 'struggle') and someone's level of income revealed no significant correlation ($r = -.48$, n.s.).

Future time perspective and consideration of future consequences

Older students compared to younger students and girls compared to boys scored higher on the future time perspective scale, but the differences were not significant. When looking at someone's present (hedonistic) time perspective, the ANOVA showed a significant main effect for 'year' ($F_{2,277} = 8.494$, $p < .001$) and 'gender' ($F_{1,277} = 4.150$, $p < .05$). Older students and girls had higher mean scores. Furthermore, as expected (hypothesis 3a), there was a significant positive correlation between 'future time perspective' and 'general tendency to save' ($r = .222$, $p < .01$).

Testing for differences in someone's level of consideration of future consequences, the ANOVA showed a significant main effect for 'year' ($F_{2,278} = 5.933$, $p < .01$). Older students seemed to consider the future consequences of their behaviour more than younger students. In addition, as expected (hypothesis 3b), there was a significant positive correlation between 'consideration of future consequences' and 'general tendency to save' ($r = .198$, $p < .01$).

Need for money

When looking at someone's 'need for money', the ANOVA showed a significant main effect for 'gender' ($F_{1,280} = 13.113$; $p < .001$). In all age groups, girls perceived a greater 'need for money' during leisure time than boys.

Parents as money management examples and someone to talk to about money management matters

When testing for mothers or fathers as money management examples, no 'year' or 'gender' effects were found. In addition, no effect of 'year' or 'gender' was found for 'money talks' with one's parents.

Saving behaviour

Past and present saving and money management

Frequencies of past saving (yes, no) showed that 16 percent of the sample (N=45) reported not having saved in the past, while there were 29 students (11 percent) who had said 'no' to both saving questions (past and present saving). The latter group of students can be considered as having no saving experience.

Around 50 percent (47 percent) of the students who reported past saving were also saving up for something at the moment of data collection.

When testing for differences in saving attitudes, no significant differences were found between those who had saved in the past and those who hadn't ('struggle': $t = -1.427$, $df = 279$, n.s.; 'saving is a good thing': $t = .441$, $df = 279$, n.s.; 'pride': $t = 1.147$, $df = 279$, n.s.; 'dependency on parents': $t = -1.227$, $df = 279$, n.s.; 'parents as guides': $t = -.336$, $df = 279$, n.s.). When testing for differences in saving attitudes between those who were and those who weren't saving up for something at the moment of data collection (current saving), significant differences were found for four of the five measures ('struggle': $t = -3.278$, $df = 273$, $p < .01$; 'saving is a good thing': $t = 4.459$, $df = 273$, $p < .001$; 'pride': $t = 2.385$, $df = 273$, $p < .05$; 'dependency on parents': $t = -4.035$, $df = 273$, $p < .001$; 'parents as guides': $t = 1.091$, $df = 273$, n.s.). Those who were currently saving had lower scores on 'struggle' and 'dependency on parents' and higher scores on 'saving is a good thing' and 'pride'.

With regard to past and present saving, students were also asked about how expensive items were they had saved or were saving up for (if applicable) and as one might expect, older students reported that the items they had been saving for in the

past were significantly more expensive than the items saved up for by the younger students ($F_{2,283} = 6.494, p < .01$). This was however not the case for the report of prices of items students were currently saving up for ($F_{2,283} = 1.017, n.s.$).

An effect of 'year' (age) was found when testing for the weeks reported one will need to save up to reach a saving goal one was currently saving up for ($F_{2,102} = 6.740, p < .01$). The saving plans of older students implied significantly longer periods of time. This means that the plans of older students extended further into the future than the plans of younger students. When testing for a difference in the number of weeks reported one had needed to achieve a saving goal in the past, no effect of 'year' was found ($F_{2,196} = 1.530, n.s.$).

There was no relationship between number of weeks one was currently planning to save up for something and someone's level of future time perspective ($r = .024, n.s.$) or consideration of future consequences ($r = .160, n.s.$). There was also no relationship between number of weeks saved up for in the past and someone's level of future time perspective ($r = -.062, n.s.$) or consideration of future consequences ($r = .016, n.s.$).

With regard to the item 'I like spending money', no effect was found for 'year' ($F_{2,287} = 2.705, n.s.$). Also, with regard to the item 'I usually give into temptation', no effect was found for 'year' ($F_{2,285} = .269, n.s.$).

Conscientiousness

Correlations between conscientiousness and the attitude subscales revealed that the more conscientious a student is, the more s/he thinks that saving is a good thing ($r = .349, p < .001$) and the more s/he is proud of saving ($r = .270, p < .001$). In addition, the students who scored high on conscientiousness, scored low on 'dependency on parents' ($r = -.189; p < .001$) and they also scored low on 'struggle' ($r = -.279, p < .001$). Furthermore, girls scored higher on the conscientiousness scale than boys ($t = -3.474, df = 283, p < .01$). As expected (hypothesis 4), there was a significant positive correlation between 'conscientiousness' and 'general tendency to save' ($r = .244, p < .01$).

Social comparisons

Correlations between saving attitudes and social comparison groups revealed that the better one thinks one is off compared to one's best friends with regard to the money received from parents, the more one shows a positive attitude towards 'dependency on parents' ($r = .315, p < .001$) and a negative attitude towards 'saving is a good thing' ($r = -.265, p < .001$). Furthermore, the better one thinks one is off compared to one's best friends with regard to the money earned, the fewer difficulties ('struggle') one seems to perceive or encounter with saving ($r = -.157, p < .05$).

Saving strategies and tactics

To investigate the underlying structure of the strategy items which could reflect ways in which students construe their saving tactics, an exploratory principal-components factor analysis (Varimax rotation) was used. This analysis revealed five distinct groups of strategies (factors): cognitive strategies (i.e. use will-power, control myself, try to budget; 25 percent of total variance); reduce need for willpower by making it physically unavailable (leaving all or part of the money or the cash card at home; 11 percent of total variance); social savings aid (use mum or someone else as a savings aid; 9 percent of total variance); reduce need for willpower by avoiding shops, distraction and focus on target (7 percent of total variance) and hide money and forget about it (6 percent of total variance). Together, they explained 59 percent of the total variance. The factor scores were saved as variables for further use. Table 5.5 shows the factor structure and the items loadings of the adolescents' saving tactics.

Table 5.5 *Structure of saving tactics*

| Item | Mental effort | Make money physically unavailable | Use mum/ someone else as savings aid | Distraction | Forget about money and/or hide it |
|--|---------------|-----------------------------------|--------------------------------------|-------------|-----------------------------------|
| limit myself, try to budget. | 0.81 | | | | |
| use will-power, control myself. | 0.79 | | | | |
| don't break into large notes. | 0.65 | | | | |
| concentrate on what I'm saving for. | 0.61 | | | 0.36 | |
| leave money or bank card at home. | | 0.78 | | | |
| leave all of it at home. | | 0.74 | | | |
| leave part of it at home. | | 0.69 | | | |
| give my bank card to mum or someone else. | | | 0.81 | | |
| give my money to my mum or someone else to look after. | | | 0.79 | | |
| make my mum or someone else put it in my bank account. | | 0.35 | 0.56 | | -0.38 |
| do something else to distract myself. | | | | 0.75 | |
| go and look at what I'm saving for, as often as possible. | | | | 0.73 | |
| avoid shops and places that involve money, look away. | | | | 0.60 | |
| put my money in my bank account. | 0.41 | | | | -0.59 |
| try to forget about my money. | 0.36 | | | | 0.55 |
| hide my money and/or bank card. | | | | 0.32 | 0.55 |
| put all my money in my money box. | | 0.38 | | | 0.42 |

Extraction Method: Principal Component Analysis.
Rotation Method: Varimax with Kaiser Normalization.

ANOVAs were run to explore developmental changes and gender differences in strategy use. When looking at young people's use of cognitive strategies to resist temptation, as expected (hypothesis 5), a significant main effect was found for 'year' ($F_{2,233} = 5.064, p < .01$). Older students use cognitive strategies more frequently than younger students. With regard to making money physically unavailable, an interaction effect was found ($F_{2,233} = 5.493, p < .01$). In Year 10, girls use this strategy less than boys, while in Year 8 and Year 12 it is the group of the girls who uses this strategy more frequently. For the use of one's mum or somebody else as social savings aid, a main effect for 'year' ($F_{2,233} = 3.785, p < .05$) and 'gender' ($F_{1,233} = 8.342, p < .01$) was found. Younger students compared to older students as well as girls compared to boys applied this strategy more frequently. The Scheffé post hoc test revealed that the gender difference applies to students in Year 12. When younger (in Year 8 and Year 10) both boys and girls do apply this strategy equally often. However, with increasing age, the option of giving money to one's mum to look after becomes less attractive (if not less acceptable) for boys than for girls.

General tendency to save

The 'general tendency to save' measure was already used in Study 1. The data collected in Study 2 allow for an investigation of students' 'general tendency to save' and its relationship with students' future time perspective and consideration of future consequences, conscientiousness, and saving motives and attitudes. Correlations of these variables with the 'general tendency to save' measure are shown in Table 5.6.

Table 5.6 *Correlations between 'general tendency to save' and study variables*

| Correlations | General tendency to save |
|---|--------------------------|
| year | .061 |
| standardized income (for each age group separately) | .160** |
| conscientiousness | .244** |
| consideration of future consequences | .198** |
| Zimbardo future time perspective | .222** |
| Zimbardo present (hedonistic) time perspective | -.02 |
| attitude subscale 'struggle' | -.588** |
| attitude subscale 'saving is a good thing' | .471* |
| attitude subscale 'pride' | .203** |
| attitude subscale 'dependency on parents' | -.307** |
| attitude subscale 'parents as guides' | 0 |
| mental: use will-power, control myself | .211** |
| reduce need for willpower, by making money physically unavailable | .027 |
| social savings aid : use mum (or someone else) | -.044 |
| distraction, avoid shops, reaffirm saving goal | -.005 |
| forget about money and hide it | -.004 |
| need for money (in leisure time) | -.275** |
| planning-behaviour (own devise) | .143* |
| With regard to the money my parents give to me, I think in comparison to my best friends, I get.. | -.078 |
| With regard to the money I earn, I think in comparison to my best friends, I earn ... | .173** |
| How often do you talk about money matters with your mum? | .036 |
| How often do you talk about money matters with your dad? | -.037 |
| How good an example do you think your mum is for you, when it comes to money management? | .041 |
| How good an example do you think your dad is for you, when it comes to money management? | .137* |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

The measure that correlated highest and significantly with the tendency to save measure was the attitude subscale ‘struggle’, followed by the subscale ‘saving is a good thing’. The remaining significant correlations were of moderate magnitude, with income (standardized) being among the lowest ones.

Students with a part-time job did not differ with regard to their ‘general tendency to save’ from students without a job ($t = 1.060$, $df = 284$, n.s.). This shows that having a higher income through wages (on average, students with a part-time job had three times as much money as students without a job) does not necessarily result in more saving behaviour.

Also, no significant effect of ‘year’ ($F_{2,283} = 2.113$, n.s.) or ‘gender’ ($F_{1,283} = 2.702$, n.s.) was found for someone’s ‘general tendency to save’. Being older did not automatically result in more saving behaviour. In addition and contrary to what had been found in Study 1, gender did not seem to matter either.

Who tends to save rather than spend money

To explore the relative importance of socio-economic (age, gender, standardized income), psychological (conscientiousness, time perspective, need for money, social comparison), behavioural (saving strategies), attitudinal, and motivational variables for someone’s general tendency to save rather than spend money, a hierarchical regression was carried out (hypothesis 6). Table 5.6 shows how each predictor variable is significantly associated with a student’s ‘general tendency to save’. A selection of 13 predictors is justifiable with a sample size of $N = 290$. The standardized income variable has been computed for each age group (‘year’) separately before merging into one variable. The income variable used for this consisted of the sum of someone’s pocket money (if pocket money was received) and the amount of money earned (if money was earned).

The first model tested for the importance of socio-economic variables alone. They accounted for seven percent of the variance with ‘gender’ and ‘income’ being significant. The beta weights show us that being a girl makes one generally less likely to save and having a higher income makes one generally more likely to save.

In a second step, it was tested whether a certain set of psychological variables related to saving will improve the overall fit of the model. Included variables were: 'conscientiousness', 'future time perspective', 'need for money' (in leisure time), and 'social comparison'. As Table 5.7 shows, all four variables were significant and explained an additional 23 percent of the variance. This shows that the psychological variables are doing a better job predicting someone's 'general tendency to save' than socio-economic variables alone.

When a third model was tested, two attitudinal variables were included. Both variables (the subscale 'struggle' and the subscale 'saving is a good thing') were significant and accounted for 20 percent of the variance. Again, the model was significant. In addition, the beta weights show us that whether someone finds saving difficult is a quite important predictor of someone's 'general tendency to save'.

Including behavioural variables related to spending and temptation inhibition resulted in a significant model but it increased the explained variance by only one additional percent. The variables entered were the two single item measures 'I like spending money' and 'I usually give into temptation', as well as the strategy 'mental effort' (use of will-power and self-control techniques to resist spending temptation). The general statement variable 'I like spending money' was significant, while the statement 'I usually give into temptation' and the saving strategy 'mental effort' were not. Whether someone likes spending money seems to be a good predictor of someone's 'general tendency to save', however, the overall increase in explained variance was very small.

Table 5.7 Overview of significant predictors for 'general tendency to save' testing different models

| Model | Independent variable | Dependent variable | 'general tendency to save' | | |
|--------------------------|---|--------------------|----------------------------|---------------|-------------|
| | | | Beta | t | Sign. |
| 1 | (Constant) | | | 7.404 | .000 |
| R ² adj = .07 | Socio-economic variables | | | | |
| | year | | .048 | .679 | .498 |
| | gender | | -.147 | -2.093 | .038 |
| | standardized income (for each age group separately) | | .230 | 3.279 | .001 |
| 2 | (Constant) | | | 4.474 | .000 |
| R ² adj = .30 | Socio-economic variables | | | | |
| | year | | .032 | .497 | .620 |
| | gender | | -.117 | -1.835 | .068 |
| | standardized income (for each age group separately) | | .223 | 3.297 | .001 |
| | Psychological variables | | | | |
| | conscientiousness | | .199 | 2.909 | .004 |
| | Zimbardo future time perspective | | .198 | 3.008 | .003 |
| | need for money (in leisure time) | | -.326 | -5.065 | .000 |
| | With regard to the money I earn, I think in comparison to my best friends, I earn ... | | .146 | 2.189 | .030 |
| 3 | (Constant) | | | 5.786 | .000 |
| R ² adj = .50 | Socio-economic variables | | | | |
| | year | | -.013 | -.235 | .815 |
| | gender | | -.023 | -.416 | .678 |
| | standardized income (for each age group separately) | | .201 | 3.507 | .001 |
| | Psychological variables | | | | |
| | conscientiousness | | -.011 | -.173 | .863 |
| | Zimbardo future time perspective | | .161 | 2.873 | .005 |
| | need for money (in leisure time) | | -.205 | -3.632 | .000 |
| | With regard to the money I earn, I think in comparison to my best friends, I earn ... | | .074 | 1.287 | .200 |
| | Attitudinal variables | | | | |
| | subscale 'struggle' | | -.409 | -6.261 | .000 |
| | subscale 'saving is a good thing' | | .179 | 2.691 | .008 |
| 4 | (Constant) | | | 3.487 | .001 |
| R ² adj = .51 | Socio-economic variables | | | | |
| | year | | .025 | .450 | .653 |
| | gender | | .016 | .293 | .770 |
| | standardized income (for each age group separately) | | .194 | 3.340 | .001 |
| | Psychological variables | | | | |
| | conscientiousness | | -.019 | -.304 | .761 |
| | Zimbardo future time perspective | | .147 | 2.613 | .010 |
| | need for money (in leisure time) | | -.162 | -2.790 | .006 |
| | With regard to the money I earn, I think in comparison to my best friends, I earn ... | | .082 | 1.434 | .153 |
| | Attitudinal variables | | | | |
| | subscale 'struggle' | | -.348 | -4.760 | .000 |
| | subscale 'saving is a good thing' | | .175 | 2.655 | .009 |
| | Behavioural variables | | | | |
| | mental: use will-power, control myself | | -.046 | -.830 | .407 |
| | I like spending money (reversed) | | .156 | 2.381 | .018 |
| | I usually give into temptation (reversed) | | .044 | .640 | .523 |
| 5 | (Constant) | | | 3.359 | .001 |
| R ² adj = .52 | Socio-economic variables | | | | |

| | | | |
|---|--------------|---------------|-------------|
| year | .038 | .685 | .494 |
| gender | .030 | .534 | .594 |
| standardized income (for each age group separately) | .182 | 3.143 | .002 |
| Psychological variables | | | |
| conscientiousness | -.034 | -.533 | .595 |
| Zimbardo future time perspective | .106 | 1.802 | .073 |
| need for money (in leisure time) | -.165 | -2.873 | .005 |
| With regard to the money I earn, I think in comparison to my best friends, I earn ... | .068 | 1.189 | .236 |
| Attitudinal variables | | | |
| subscale 'struggle' | -.328 | -4.493 | .000 |
| subscale 'saving is a good thing' | .145 | 2.171 | .031 |
| Behavioural variables | | | |
| mental: use will-power, control myself | -.046 | -.828 | .409 |
| I like spending money (reversed) | .147 | 2.264 | .025 |
| I usually give into temptation (reversed) | .069 | 1.011 | .314 |
| Motivational variables | | | |
| cash management | .131 | 2.121 | .035 |

The last model tested the importance of the motive 'cash management'. The variable was significant but again, this did improve the overall explanatory power by only one percent.

The results show that for an explanation of a young person's 'general tendency to save', income, as well as future time perspective, perceived need for money in leisure time, overall spending enjoyment, perceived difficulties with saving, as well as an idea of saving as being a good thing are most essential.

Furthermore, the different models show separately how vital some of the variables are when other variables have been taken into account. Worth noting here is the conscientiousness measure that becomes insignificant once the attitude subscales 'struggle' and 'saving is a good thing' are entered.

Model 3 is the one that fits the data best. The variables explain a reasonable percentage of the variance (50 percent) and adding behavioural variables as well as the motive 'cash management' only increases the explained variance by two percent. Looking at model 3 more closely (i.e. comparing the beta weights), one finds that overall, someone's perceived easiness of saving ('struggle') seems to be as -if not more- important as someone's income.

5.2.4 Discussion

This second study has demonstrated a number of developmental changes and provided valuable insights into the saving behaviour of adolescents. All hypotheses were confirmed.

Motives

The finding that goal saving was the most important motive for students of all age groups studied confirms hypothesis 1a and is in line with what Jundin (1988) found in her interview study with adolescents in Sweden.

The next most important motive was ‘independence’ (saving to increase their freedom). This confirms hypothesis 1b and is consistent with the idea that during adolescence, young people strive for independence (Coleman & Hendry, 1999) and that this is reflected in their saving motives. As adolescents grow older, their activities become more autonomous. They have more money at their disposal (Furnham & Thomas, 1984a; Furnham, 1999; Sonuga-Barke & Webley, 1993, and result of Study 1 and Study 2) and with age, adolescents gain more freedom also with regard to their financial decisions.

The next most important motive was saving to stay in control of one’s finances (cash management). This is the motive considered most basic in the hierarchical models of saving motives (Lindqvist, 1981; Wahlund & Wärneryd, 1987). Without the financial responsibilities of adults, it is not surprising that adolescents save as a means of managing their spending budget.

The finding that the motive ‘precaution’ was not among the most important motives (as one would find with adults), was expected (hypothesis 1c). It is therefore possible that adolescents consider unforeseen circumstances and ‘rainy days’ as something parents might take care off. However, saving for a buffer, despite having parents who might function as a buffer, still seemed to be of medium importance to all age groups studied. It could be that there are certain things that adolescents feel responsible for independently from their parents. Or, for certain circumstances, they want to be able

to solve a problem without having to ask their parents for extra help. It is however also possible, that the students in my study reported buffer saving because they thought they ought to either save for a rainy day or ought to report saving for a rainy day (social desirability). Apparently, adults without a buffer seem to feel guilty about not having one (Wärneryd, 1999).

There were only minor differences in the order of importance when the three income groups were compared. But in the high income group, cash management came second. Apparently, when more money is available, saving is used as a tool to stay in control of one's finances. The high income group is probably comparable with the 'cash managers' identified by Wahlund and Wärneryd (1987).

Overall, this study of adolescents' saving motives showed that young people can best be regarded as goal-directed savers who also value independence.

Attitudes

The present study has provided more detailed insights into developmental changes of adolescents' thoughts about and attitudes towards saving.

First, there seemed to be a decrease in experienced difficulties with saving suggesting that as they grow older, adolescents get better at saving. There are many things that older children compared to younger children are better at. But from this information alone, we do not exactly know what is going on and can therefore not conclude that saving automatically becomes easier with age. Yet, the current study points towards one issue that might be related to this progress: the increase in the use of cognitive strategies with age. In line with this is the positive relationship between the use of cognitive strategies and someone's 'general tendency to save'. Furthermore, older students might be more experienced as savers, and therefore experience fewer difficulties. However, as there was no difference in any attitude subscale when students who had saved in the past were compared to those who hadn't, not much can be said about the relationship between the students' own past saving experiences (as measured in this study) and their saving attitudes. It suggests that when young, saving attitudes might not be strongly related to past saving

experiences. This finding hints at the potential relationship between saving attitudes and upbringing. On the other hand, the correlations of the attitude subscales and the 'general tendency to save' measure implicate that one's own behaviour and one's attitudes are closely related. The results of the t-tests for those with and without current saving plans suggest the same. Roland-Lévy's (1995) research indicates that saving is (still) perceived as something that is difficult by adults (with low and intermediate salaries). In the current study, no relationship was found between experienced difficulties with saving ('struggle') and someone's level of income, but between someone's 'general tendency to save' and someone's level of income. On the other hand, there was no relationship between someone's 'general tendency to save' and 'year' in school (i.e. age). Thus, being older does not mean that one necessarily saves more or more often. Another issue that could be related to the experience of difficulties with saving might be the perceived need for money for leisure activities. If someone experiences a great need for money, saving might therefore appear more difficult. The fact that girls indicated a greater need for money might help explain why girls reported more difficulties with saving. Another explanation is offered by girls' higher levels of being easily worried as reflected in their higher scores on the conscientiousness scale.

No effect of 'year' or 'gender' was found for the attitude subscale 'saving is a good thing'. This contradicts the results of the study by Furnham and Goletto-Tankel (2002), who found that older and more educated participants had more positive attitudes towards saving behaviour.

The age differences found in the attitude subscale 'pride' showed that the youngest and the oldest students in the sample were less proud of saving than the students in Year 10. It is possible, that adolescents struggle most with saving or are most aware of the difficulties with it around the age of 15.

The attitude subscale 'dependency on parents' taps into saving as being pointless because parents are there to help out and because children are not expected to save. The finding that older students score lower on this attitude subscale confirms hypothesis 2a. It shows that the overall increase of independence that is gained during adolescence (Coleman & Hendry, 1999; Douvan & Adelson, 1966) also is

reflected in the adolescents' decrease in dependency on parents when the focus is on saving. In addition, as predicted (hypothesis 2b and 2c), those who scored high on 'I like spending money' and 'I usually give into temptation', also scored high on the attitude subscale 'dependency on parents'. This shows, in line with the finding of Study 1, that adolescents who generally favour spending and are less patient tend to hold an attitude towards saving that is characterised by 'dependency on parents'. In Study 1, the two items were related to the adolescents' choice for 'negotiate, borrow, dissave', in order to get larger sums of money. The fact that one finds this relationship with a behavioural (in Study 1) and an attitudinal measure (in Study 2) shows that it is substantial. It should however be noted that the finding is correlational, which means that one cannot say anything about cause and effect.

The finding that when older, adolescents make less use of their parents as guides can be seen in line with the finding that older adolescents seem to score lower on the subscale 'dependency on parents'. They probably think they know already well enough how to deal with their income or daily finances when they are about 17 years old. Furthermore, adolescents start shopping more with peers than parents (Griffin, Phoenix, Croghan, Hunter, & Fowler, 2005) and maybe as a consequence of this, they also talk more often with their friends and peers about money management matters than with their parents.

Future time perspective and consideration of future consequences

There was no significant difference but a trend showing that when older, students also scored higher on the future time perspective measure that was used. This is in line with the findings of Klineberg (1967), Greene (1986), and Shannon (1975), who all found that during adolescence, with cognitive maturation, the length of someone's future orientation increases. The finding that with regard to someone's level of consideration of future consequences, the difference between the younger and the older students was significant supports this.

Based on findings of research conducted with adults, a positive relationship was expected between someone's 'general tendency to save' and 'future time perspective' as well as 'consideration of future consequences' (hypothesis 3a and

3b). The confirmation of hypothesis 3a and 3b shows that the relationship between saving and the psychological variables ‘future time perspective’ and ‘consideration of future consequences’ is also existent at adolescence.

Conscientiousness

Although the conscientiousness measure in this study was not very reliable, conscientiousness seemed to be negatively related to the attitude subscales ‘struggle’ and ‘dependency on parents’. The more conscientious one was the less often one reported to struggle with saving and the less one seemed to think about saving in a way that is characterised by a dependency on one’s parents. The first relationship confirms that traits such as self-discipline and the ability to delay gratification (which are related to conscientiousness) can facilitate saving. In other words, if someone who is conscientious is more disciplined, then, saving might be perceived as being less difficult. In addition, if someone regularly sticks to one’s principles, then, that person is probably also better at sticking to a savings plan. The second relationship, the finding that conscientiousness was negatively correlated with ‘dependency on parents’ shows, that conscientious students hold more mature attitudes towards saving than less conscientious students.

Furthermore, those who scored high on the conscientiousness measure not only perceived fewer difficulties with saving but also claimed to save more in general. This confirms hypothesis 4. It indicates that the personality dimension conscientiousness plays an important role for saving (already) when young.

Nevertheless, from the correlations so far, we don’t know yet how important this measure is for predicting saving during adolescence, when other variables are taken into account (as investigated with data from adults by Nyhus, 2002). This is something that was addressed using hierarchical regression analysis and will be discussed at the end of this chapter.

Saving strategies and tactics

The investigation of the strategies students use to stop themselves from spending too much has revealed five groups of strategies. The finding that older students more often than younger students applied cognitive strategies when trying to save money confirms hypothesis 5. While Sonuga-Barke and Webley (1993) found this increase with children between the ages six and 12, the students who took part in Study 2 were 11 years and older. This shows that the general development of cognitive abilities during pre-adolescence and adolescence (Orr, Brack, & Ingersoll, 1988) has an influence on the range of strategies young people are using for saving and to deal with temptation.

The second group of strategies, the strategy of making money physically unavailable, is a tactic for self-control that does not involve willpower. Making money physically unavailable facilitates saving by reducing the need for mental effort. Thus, if I leave (part of) my money at home, spending it becomes impossible or more difficult (because one might think twice before going home to get it, before going to the bank to get some out of an existing bank account, or before asking a friend, if accompanied, whether one could borrow some). The interaction effect found for the strategy 'make money physically unavailable' came about because this strategy was most frequently used by boys in Year 10 while being least frequently used by girls in Year 10. It is possible that boys in Year 10 used this strategy as an independent way of reducing the need for willpower. The girls reduced their need for willpower by other less independent means (use mum or someone else as social saving aid, see below).

Using one's mother or somebody else as a savings aid was a strategy more often applied by younger students and by girls. The decrease in usage of this strategy with age could have been anticipated. It shows that older students, more than younger students, try to solve the temptation problem more independently, that is without the help of someone else or someone's mother. The gender difference shows that for girls, it might be more acceptable to ask for assistance as has been found for the attitude subscale 'parents as guides'. The gender difference for this strategy was even significant at the one percent level. Since girls have reported to experience more difficulties with saving, this finding suggests that they try to solve this problem by

reducing the availability of money through the help of an agent (mum or someone else). There is some similarity in this strategy and deductions from wages in the adult context. Also, with a pre-commitment like this, spending becomes more difficult.

General tendency to save and past and present saving

At the univariate level, the relationship between someone's 'general tendency to save' and four of the five saving attitude subscales was quite strong. Besides this, significant relationships were found with the psychological variables that were included based on previous research by other authors on saving behaviour in adults. This indicates that for the development of a saving habit (if this is what the 'general tendency to save' measure captures), the same psychological measures and personality variables seem to play a role, that have been shown to be related to the saving behaviour of adults.

When asked about past or present saving goals, older students compared to younger students reported saving for goals that implied longer periods of saving. No difference was found between students with high and low scores on the future time perspective scale and length of saving periods. This shows that age was of greater influence than someone's future time perspective, when it comes to the timing of saving goals.

The finding that students with and without a part-time job did not differ on the 'general tendency to save' measure gives rise to the question whether the working students enjoyed (and spent) their higher income, because it enables a different lifestyle. In contrast to this is the finding that earned money is spent more carefully than money received from parents. This is something that was found in Study 1. On the other hand, when Roland-Lévy and Hervé (1999) investigated differences in spending when money is given (by parents) or earned, no differences were found with regard to the amount of money spent by young adults who worked and those who were supported by their parents. Therefore, from this finding alone, it remains unclear, what the role of working and earned income is for someone's 'general tendency to save'.

While Furnham and Thomas (1984a) found that older students saved more, in this study, this was not the case. In the study by Furnham and Thomas, older children compared to younger children seemed to save more, in a different way, and for different reasons. We have learned from Study 1 that saving as a means of getting larger sums of money becomes more important to students as they grow older. The 'general tendency to save' measure was one of the predictors of someone's saving choice. One reason for not having found an age effect now could be that the 'general tendency to save' measure is tapping into a potential saving habit. If such a saving habit or general money management preference is developed before the age of 13, then, it would not be surprising, that there was no increase with age on this measure.

The percentage of students who reported not to have saved yet in the past (11 percent) corresponded reasonably with the percentage of adults described as non-savers (14 percent) in the study by Lunt and Livingstone (1991).

Hey little spender! Who tends to save rather than spend money?

Who is the 'little spender' and who tends to save rather than spend money? The results of the regression indicate that as expected, when young, someone's income, as well as certain psychological variables, measures that tap into a young person's spending behaviour, and attitudes towards saving, are good predictors of adolescents' 'general tendency to save'. The fact that income remains significant in all models shows that it is indeed a central predictor. This is not surprising, since with little money at hand, a young person -just like a grown-up person- would probably not save, because the money he or she has is just enough for him or her to buy a few nice things throughout the week or month (marginal propensity to save, Keynes' Absolute Income Hypothesis, 1936). In line with this, it is also not surprising that a student's perceived need for money in leisure time turned out to be significant as well. It is possible that the 'need for money' measure used here is tapping into the adolescents' perceived propensity to save. If I think I need a lot of money for all the things I like doing in my free time and if this spending is seen as a regular expenditure that is necessary (fixed cost), saving might become more difficult and the decision to save on a regular basis will be made less frequently.

Despite its noticeable prominence, however, someone's income gives only a partial picture. This becomes evident when looking at the small amount of variance explained by socio-economic variables alone. Apparently, knowledge about a student's level of income is not enough to successfully classify him or her as a saver or non-saver ('little spender'). As hypothesised (hypothesis 6), other variables come into play and the variance they explain is sizable. Similar to the research conducted with adults, future time perspective turned out to be significant (respondents who plan more and have longer planning horizons tend to save more, Julander, 1975; Lea, Webley & Walker, 1995; Webley & Nyhus, 2001) but with young people, particularly influential also seems to be whether someone perceives saving as difficult or not. Including the attitude measures explains an additional 20 percent of the variance. Someone's difficulties with saving will probably therefore determine someone's 'general tendency to save' as much as income does.

This finding raises the important question of what makes some students find saving more difficult than others? Do children who perceive saving as something that is difficult and hard to keep up also find it difficult to resist temptation? Furthermore, do children who find it difficult to resist temptation have less well learned how to control themselves and also find it more difficult to delay gratification? When comparing the older students to the younger students, there was no decline in the students' scores on the 'I usually give into temptation' measure. In all age groups studied, there were students who claim being able to resist temptation as well as students who state that they usually give into temptation. This suggests that a students' ability to resist temptation does not increase or improve between the ages 12 and 18.

When investigating children's ability to delay gratification, Mauro and Harris (2000) as well as Reitman and Gross (1997) found relationships with maternal child-rearing attitudes, teaching behaviours and parenting style. Furthermore, Ölander and Seipel's (1970) assumption that saving attitudes are connected and deeply rooted with upbringing and life style forces us to think about the behaviour of parents as something that should be looked at when investigating young people's attitudes towards saving and their saving skills. In other words, based on research that stresses the role of maternal child-rearing attitudes and parenting style with regard to

children's ability to delay gratification, the investigation of the development of a saving attitude that is dominated by experienced difficulties, should focus on the impact of the behaviour of parents. This means that in sum, the results of Study 2 confirm and emphasize that for a better understanding of the processes that are involved in the development of saving behaviour during adolescence, it is vital to also look at the influence of the family context.

While Furnham (1993) has distinguished between parents who see themselves as 'educators' and parents who see themselves as 'protectors', and later (2001) investigated determinants of parental attitudes to pocket money and allowances, a much more general approach to parenting and its impact on children's saving via the promotion of the acquisition of self-control techniques and strategies to delay gratification has not been taken in economic socialization research yet. In the following chapter, the research of adolescents' saving behaviour will be put into the context of the family, to investigate the relationship between the parents' parenting style and the saving behaviour of their adolescent child.

5.3 Summary

The study presented in this chapter has provided detailed information about how important the saving motives identified by Keynes (1936) and Lindqvist (1981) for adolescents are, what the adolescents' saving attitudes are and how they differ for early, middle, and late adolescents. Furthermore, the study has provided valuable insights into the use of saving strategies. All changes found for the importance of motives, the relevance of saving attitudes, and the use of strategies, could be accommodated within age-appropriate developmental changes that are specific to adolescence.

The finding that the psychological variables relevant to adult saving also help us better understand the saving behaviour of adolescents suggests that there are continuities between adolescent and adult saving. The fact that in adolescence, the difficulty experienced with saving is one of the main predictors of the adolescents' 'general tendency to save' highlights that self-control and ability to delay

gratification are important skills for saving when young. From this, and from the parenting research reviewed in Chapter 2, it follows that for the investigation of adolescent saving behaviour, a consideration of the behaviour of the parents should considerably further our understanding of the development of saving behaviour in adolescence.

Chapter 6 - Adolescent Saving in the Family Context

6.1 Introduction

The results of the second study support the argument that in order to better understand the development of saving behaviour during adolescence, as well as the difficulties adolescents have with saving, it is essential to investigate adolescents' saving in the social context of the family. The following study will address this issue systematically. The aim of Study 3 is to refine our understanding of the role of parents in the development of their children's saving ability and competence in adolescence. To achieve this, the impact of perceived parenting style on the saving behaviour of adolescents will be investigated.

Developmental research suggests that an investigation of parenting behaviour in the context of becoming an economic agent will be productive. The four parenting styles identified by Baumrind (1967, 1971) and described in Chapter 2 vary in their level of control and strictness on the one hand and their level of parental warmth, acceptance and involvement on the other hand. Some of the positive outcomes researchers have found in relation to the authoritative parenting style (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987; Steinberg, Elmen, & Mounts, 1989; Mauro & Harris, 2000) suggest that there might also be positive relationships between this style and a young person's saving attempts. Several studies have for instance reported that self-control and self-regulation skills are fostered by authoritative parenting (Baumrind, 1971; Patock-Peckham, Cheong, Balhorn, & Nagoshi, 2001; Morris, 2003; Soward, 2006; Madigan, 2005). When Soward (2006) investigated the relationship between maternal parenting style, self-control, and children's self-control and behavioural concerns in at-risk preschool children, the findings suggested that higher levels of authoritative parenting style predict higher levels of children's self-control. Likewise, Morris' (2003) results indicated that an authoritative parenting style was a predictor of self-regulation skills in young children. Furthermore, someone's ability to delay

gratification has been found to be fostered by authoritative parenting (Mauro & Harris, 2000). The notion that self-control, locus of control (Rotter, 1966), and the ability to delay gratification are important skills for being successful at saving has been investigated, emphasized, and demonstrated by Ainslie (1975), Shefrin and Thaler (1992), Romal and Kaplan (1995), Wood (1998), Wärneryd (1999), as well as Lunt and Livingstone (1991), and others. This suggests that there might well be links between perceived parenting style and ability to delay gratification in the context of saving (in childhood and adolescence).

According to Lightsey (1996), general self-efficacy is particularly useful for understanding subjective well-being. In line with this, Caprara, Steca, Gerbino, Paciello, and Vecchio (2006) found that self-efficacy beliefs affect positive thinking and happiness. When investigating the relationship of positive and negative perfectionism to general self-efficacy and subjective well-being among gifted students in China (aged seven to 18), Chan (2007) also demonstrated that general self-efficacy affected subjective well-being. The notion that family parenting styles are associated with adolescent well-being has been emphasized by Maccoby and Martin (1983). In keeping with this are the results of the study by Lamborn, Mounts, Steinberg, and Dornbusch (1991), which indicate that parental acceptance and involvement may contribute to the development of psychological well-being in adolescents. It is therefore likely that parenting style also has an effect on the self-efficacy beliefs of adolescents.

Building upon empirical evidence reported above, the following linkages between perceived parenting style and discrete aspects of saving behaviour are expected:

H1: It is hypothesised that adolescents from authoritative homes will (a) be better at handling temptation in a saving context and (b) have stronger saving self-efficacy beliefs.

If adolescents from authoritative homes are better at handling temptation and have stronger self-efficacy beliefs, they might in general perceive fewer difficulties with saving. This idea (that adolescents from authoritative homes might find saving easier than adolescents from non-authoritative homes) is expected to be reflected in a

number of relationships between perceived parenting and the saving attitude subscales 'struggle', 'saving is a good thing', and 'pride'. Their overall evaluation of saving could for example, as a result of a perceived easiness, be more positive and in line with this, they might be more proud of their saving as well. Because the parenting style dimension 'psychological control' has consistently been found to be correlated with dependency (Baumrind, 1978; Becker, 1964), it is possible that adolescents who perceive their parents as authoritative (high in autonomy granting and low in psychological control) think and act more independently as economic agents. This could be displayed through their scores on the saving attitude subscale 'dependency on parents'. Moreover, given that authoritative parents regularly use reasoning when setting limits (Baumrind, 1971), adolescents from authoritative homes might be more inclined to ask for parental guidance when it comes to saving than adolescents from non-authoritative homes.

H2: It is hypothesised that compared to adolescents from non-authoritative homes, adolescents from authoritative homes will score (a) lower on the attitude subscale 'struggle', (b) higher on the attitude subscale 'saving is a good thing', (c) higher on the subscale 'pride', (d) lower on the subscale 'dependency on parents', and (e) higher on the attitude subscale 'parents as guides'.

Furthermore, impulse control and self-control are frequently referred to as facets of conscientiousness (Gough, 1957; Cattell, 1965; Hough & Ones, 2001; Costa & McCrae, 1998; Peabody & De Raad, 2002). While various inventories emphasize different aspects of conscientiousness, impulse control and self-control seem to be one of the core dimensions of the conscientiousness construct. Also, in their empirical investigation of the structure of conscientiousness, Roberts, Chernyshenko, Stark, and Goldberg (2005) found that self-control was one of the three factors that showed good discriminant validity (the other two factors were order and industriousness). Because the role of parenting (practices) for the development of the personality of their children has widely been investigated and resulted in puzzling results (see for example Loehlin & Nichols, 1976), more recently, the focus has been on gene-environment interactions and correlations, when research has been conducted to for example investigate adolescent substance use (Dick et al., 2007) or adolescent drinking (Rose, 2007). Acknowledging the important role of genes for

accounting for about 50 percent of the variance in major dimensions of self-reported personality, Rose (2007) concludes his review of adolescent socialization from a twin-study perspective that “socialization effects of peers and parents are evident, not so much as main effects, but as processes that modulate the dispositional tendencies of adolescence” (p. 122). One way in which parenting practices or parenting style could modulate the personality dimension conscientiousness, might be through its effect on children’s self control. Thus, if higher levels of authoritative parenting significantly predict higher levels of children's self-control (Soward, 2006), then, higher levels of authoritative parenting might also be associated with higher levels of conscientiousness.

The second psychological variable that will be addressed is future time perspective. This measure has already been found to be related to perceived parenting, parental warmth and parental acceptance (Nurmi, 1987; Nurmi & Pulliainen, 1991; Pulkkinen, 1990; Trommsdorff, 1983; Seginer, Vermulst, & Shoyer, 2004). In their research, Seginer et al. (2004) demonstrated an indirect effect of perceived parenting on the construction of future time perspective via self-evaluation.

H3: It is hypothesised that compared to adolescents from non-authoritative homes, adolescents from authoritative homes will be (a) more conscientious and (b) more oriented towards the future.

Moreover, since it has been found that authoritatively raised adolescents are granted more autonomy than adolescents from non-authoritative homes (Baumrind, 1967, 1971; Silk, Morris, Kanaya, & Steinberg, 2003), they might also choose a more autonomous approach when it comes to getting larger sums of money, such as ‘saving by adjusting expenditure’, as opposed to ‘negotiate, borrow, dissave’.

H4: It is hypothesised that compared to adolescents from non-authoritative homes, adolescents from authoritative homes will (a) more frequently consider ‘saving by adjusting expenditure’ and (b) less frequently consider ‘negotiate, borrow, dissave’ as a means of getting larger sums of money.

Finally, the results of Study 2 as reported in Chapter 5 indicated that an adolescents' general tendency to save seems to a large extent be affected by the adolescents' perceived difficulties with saving. The expected relationships between perceived parenting style and the saving related variables 'resisting temptation', 'difficulties with saving', 'saving self-efficacy', 'conscientiousness' and 'future time perspective', suggest that when looking at someone's general tendency to save, one should be able to demonstrate a relationship of this variable with perceived parenting style as well.

H5: It is hypothesised that compared to adolescents from non-authoritative homes, adolescents from authoritative homes will score higher on the 'general tendency to save' measure.

In sum, the third study sets out to provide detailed information about the links between general parenting behaviour as measured through perceived parenting style and the variables that are related to saving behaviour during adolescence as investigated in Study 2. Study 3 will be used to test for a number of hypotheses that are based on theoretical constructs and empirical evidence. The study will shed light on the processes through which perceived parenting style has an effect on (or is related to) the development of saving behaviour during adolescence.

The fact that adolescents can accurately and reliably report on their parents' parenting practices, has been documented in the literature by Golden (1969) and Moscovitz and Schwarz (1982). Therefore, it was decided to run the next study with students only. Parenting style will be treated as a general style of child rearing that characterises the parent's behaviour towards the child in a wide variety of situations. The four dimensions warmth and support, strictness and supervision, autonomy granting and psychological control will be used to compute the four parenting style variables: authoritarian, permissive, authoritative, and neglectful.

Looking at the influence of perceived parenting style on a number of adolescent variables is obviously a simplification since it suggests that the process of (economic) socialization is unidirectional. However, as a starting point for the investigation of adolescent saving in the context of the family, this approach is

appropriate because it will enable us to get a clear sense of the role parents might play in their adolescent child's saving behaviour when looked at from a general socialization perspective.

6.2 Study 3

6.2.1 Participants

From a college in Devon (Queen Elizabeth Community College), 243 students in Year 9 took part (13- to 14-year-olds). An additional group of students in Year 9 from another college in Devon (Tiverton High School) was invited. In total, 446 students were given a questionnaire on money management that they completed during a normal school lesson. The survey was considered as one that would not pose any psychological risk for students. Therefore, the Ethics Committee of the School of Psychology (University of Exeter) agreed that head teacher consent was sufficient.

Students were free to decide whether they wanted to take part or not. Since in Study 3 it was possible to win prizes at the end of the data collection procedure, every student had to fill out the questionnaire in the first place, but was given the opportunity to opt out at the end. They could then, after having been told about the procedure for participation in Study 4, tell the researcher whether they wanted their family to be included (and if not, hand back their family pack). In case they then also wanted to opt out of Study 3, they could tell the researcher to destroy their questionnaire. By doing it this way, it was ensured that at this stage of the research, also students took part who would anticipate that their parents will not be interested in Study 4. This procedure also prevented that students who would have refrained from taking part at the beginning (and therefore missed their chance of winning something later on in the procedure), would probably afterwards complain about their missed chance. In other words, at the end of the lesson, all students had a chance to be included in the study that required their parents to take part (with the opportunity of getting an incentive; a cinema voucher). In the first school, two students opted out and in the second school one student opted out, leaving a sample of 443 students in total.

Table 6.1 *Descriptive statistics by college*

| Community College | N | Average age (in years) | Gender | | Average income (in £) | |
|-----------------------------------|-----|---------------------------|--------|--------|------------------------------|-----------------|
| | | | Male | Female | Pocket money or allowance | Money earned |
| Queen Elizabeth Community College | 241 | 13.49 | 117 | 122 | 23.22 | 29.94 |
| Tiverton High School | 202 | 13.54 | 96 | 104 | 23.38 | 38.50 |
| Total | 443 | 13.51 | 213 | 226 | 23.30 | 33.91 |

6.2.2 Material

The questionnaire was made up of five sections, beginning with general demographic information (age, gender, income), followed by questions on money management and preferred ways of getting larger sums of money. The next section included a number of psychological measures such as conscientiousness, time perspective, attitudes towards saving and a measure of self-efficacy concerning stopping oneself from spending too much when trying to save up. The final section consisted of questions about the adolescents' family. An example of the questionnaire used in Study 3 can be found in Appendix 13.

Measures

General Tendency to save rather than spend

This composite measure is similar to the one used in Study 1 and Study 2. This means, all five items that were included in the previous studies were also included this time. Again, to compute the scale, four of the five items were recoded so that a high score on the scale means that someone generally tends to save money (N = 276, alpha = .82).

Getting larger sums of money

This measure was developed for Study 1 and was included in the questionnaire as before.

Conscientiousness

The conscientiousness measure by Brandstätter (1988) used in Study 2 was weak and internally not as reliable as was desirable (despite having been piloted and slightly improved in advance). It was therefore decided to use another measure that consisted of 10 items from a personality inventory (International Personality Item Pool, 2001) and measured the lower-level facets of several five-factor models (Factor 1: surgency or extraversion; Factor 2: agreeableness; Factor 3: conscientiousness; Factor 4: emotional stability; Factor 5: intellect or imagination). The items were easy to understand so that they could be used with young people as they were (N = 386, alpha = .77). Example items are 'I pay attention to details.', 'I like order.', and 'I often forget to put things back in their proper place.' (reversed).

Present-hedonistic and Future Time Orientation

As in Study 2, the measure by Zimbardo and Boyd (1999) was included to measure students' future time and present (hedonistic) time perspective. For the future time perspective scale the reliability estimate was .75 (N = 404) and for the present hedonistic time perspective scale it was .68 (N = 402).

Need for money

This measure was developed for Study 2 and was included in the questionnaire as before (N = 432, alpha = .67).

Saving strategy self-efficacy

To investigate the self-efficacy thoughts of students when it comes to stopping themselves from spending too much when trying to save up for something, a measure, based on Purdie, Carroll, and Roche's (2004) non-academic efficacy measure, with the focus on the strategies that were the result of Study 1, was developed. Students were asked to indicate how well they can do the following to stop themselves from spending too much, on a five point scale (1: not very well; 2: a little; 3: somewhat; 4: quite well, 5: very well). A combination of cognitive and behavioural tactics such as 'avoid shops and places that involve money', 'limit yourself, budget', and 'wait until an item you'd like to buy is on sale' were included (10 in total).

Saving attitudes

Items for all subscales as used in Study 2 were included. This time, the estimates for this instrument were in the ranges of .60 to .81 (Ns varied between 396 and 409).

Perceived parenting style

A total of 42 items were selected to correspond with the following four dimensions of parenting: warmth and support, strictness and supervision, autonomy granting, and psychological control.

To assess parental warmth and support (or warmth and involvement), students were asked how often (1: never; 2: rarely; 3: sometimes; 4: often, 5: always) 14 different things, would happen in their family. These items were taken from Lamborn et al. (1991). Examples are 'When someone in our family leaves or comes home, he or she tells it to the other family members.', 'My parents spend time just talking to me.', and 'I can count on my mother (stepmother/ guardian) to help me out, if I have some kind of problem.' (N = 393, alpha = .91).

Strictness and supervision (also referred to as behavioural control) were measured with a 10-item monitoring scale often used in family research with adolescents (e.g.

Brown, Mounts, Lamborn, & Steinberg, 1993; Lamborn, Mounts, Steinberg, & Dornbusch, 1991). The 10 monitoring items were presented in two blocks. In the first block of questions, students were asked how much their parents (step-parents/guardians) *try* to know for example ‘where they go at night’, ‘what they do with their free time’ or ‘how they spend their money’. The second block of questions included the same items, but this time, students were asked how much their parents *really* know ‘where they go at night’, ‘what they do with their free time’ and ‘how they spend their money’. In addition, students were asked about how late they were allowed out on a typical week on school nights and on Friday or Saturday nights (Lamborn et al., 1991). In total, strictness and supervision were measured by 12 items (N = 389, alpha = .76).

Autonomy granting was assessed through eight items as used by Silk, Morris, Kanaya, and Steinberg (2003). Example items are ‘My parents emphasize that every member of the family should have some say in family decisions.’ and ‘My parents keep pushing me to think independently.’ (N = 408, alpha = .73).

Psychological control was also assessed through eight items as used by Silk et al. (2003). The items tap into covert strategies such as guilt induction and love withdrawal. Examples are ‘My parents act cold and unfriendly if I do something they don’t like.’ and ‘When I get a poor grade, my parents make me feel guilty.’ (N = 396, alpha = .81).

Many researchers have taken these items from existing measures of parenting developed to reflect the major dimensions of parenting as described by Baumrind (1991). In doing so, they have sometimes not only adapted the items but also changed the response scales. For the purpose of this study 5-point scales and one 7-point scale were used instead. This was done to keep it simple and consistent for the students (i.e. throughout the questionnaire, 5- and 7-point-scales were used) and in addition, with regard to the analysis, 5-point-scales do provide more detailed information than 3-point-scales or binary data.

6.2.3 Results

On average, students from Tiverton High School earned more money than students from Queen Elisabeth Community College ($t = -2.307$, $df = 298$, $p < .05$). There was no difference in the amount of pocket money received from parents.

For the measures for getting larger sums of money, a confirmatory factor analysis was run to see whether the solution with four factors as found in Study 1 was a stable one. For three of the factors ('saving by adjusting expenditure', 'selling' and 'working outside home'), the loadings were reasonably similar. The two saving items together with the items that tap into adjusting expenditure loaded on Factor 1. However, this time, work more at home (do chores to earn some extra money) loaded on this 'saving by adjusting expenditure' factor as well. In addition, this time, the item 'think about my savings and whether I would want to dig into them' did not load on the factor 'negotiate, borrow, dissave' but on Factor 4, on which the two items that tap into 'working outside home' were loading. Factors 2 and 3 can clearly be described as 'selling' and 'negotiate, borrow' respectively. All three selling items loaded on Factor 2, while all the items that tap into negotiating with and relying on parents loaded on Factor 3. The factor scores were saved as variables for further use. Note that Factor 3 was now labelled 'negotiate, borrow' (as opposed to 'negotiate, borrow, dissave' in Study 1) and Factor 4 was labelled 'work outside home, dissave' (as opposed to 'work outside home' in Study 1).

In order to classify students according to their parents' parenting style, k-means cluster analysis was used. It was expected that based on the four dimensions of parenting, four clusters should emerge that correspond to the parenting styles authoritative, authoritarian, permissive, and neglectful. However, only three of the four final cluster centres of the solution matched the parenting styles as described in the literature. These were the 'authoritarian' ($N = 115$), 'neglectful-unengaged' ($N = 80$), and 'authoritative' ($N = 142$) style. The fourth cluster ($N = 101$) can best be described as 'over-involved'. Table 6.2 shows that this group scored highest on all dimensions. Thus, parents of this group of students do have a lot in common with parents who are perceived as authoritative by their adolescent child, but they score high on psychological control too. The four clusters represent 98.9 percent of the sample.

Table 6.2 *Final cluster centres showing which parenting styles are represented in the sample*

| | Cluster 1: Authoritarian | Cluster 2: Neglectful- Unengaged | Cluster 3: Authoritative | Cluster 4: Over-involved |
|-------------------------|-----------------------------|--|-----------------------------|-----------------------------|
| Warmth/ support | 3.25 | 2.75 | 4.08 | 4.28 |
| Strictness/ supervision | 3.48 | 2.69 | 3.73 | 3.86 |
| Autonomy granting | 2.94 | 2.59 | 3.33 | 3.68 |
| Psychological control | 3.04 | 2.51 | 1.84 | 3.12 |
| Number of cases (N) | 115 | 80 | 142 | 101 |
| N in percent (%) | 26.0 | 18.1 | 32.1 | 22.8 |

Cluster 1 has the strictness and the psychological controlling tendencies typical for authoritarians (Silk, Morris, Kanaya, & Steinberg, 2003). Parents in this cluster are perceived by their children as not particularly warm and supportive or autonomy granting.

Cluster 2 is characterised by low scores on all dimensions. This group is the smallest and represents students who perceive their parents as being unengaged or neglectful. Contrary to what was found by Aunola, Stattin, and Nurmi (2000), in this study, boys were not over-represented in neglectful families (there are about as many boys as girls in this cluster).

Cluster 3 exhibits all traits of authoritative parents. Parents in this cluster are described as being the least psychologically controlling, while at the same time still being strict and firm. Moreover, students in this cluster state that their parents are warm and supportive, as well as autonomy granting. As in the study by Aunola et al. (2000), girls were over-represented (girls N = 94; boys N = 48) in this group.

Cluster 4 is characterised by high scores on all measures. This group is different from cluster 3 because of the high levels on all measures, which includes a high level of psychological control. This is atypical for authoritative parents (Barber, 1996).

Given these four parenting styles, where the permissive style was not found but where an over-involved style (in parts similar to the authoritative style) appeared, it is expected that for all but one of the hypotheses that will be tested in the following (by use of analyses of variance), the two parenting styles ‘authoritative’ and ‘over-involved’ will have similar effects. The expectation formulated under hypothesis 2d is based on the effect of a low level of psychological control typical for authoritative parenting, and therefore, in this case, the two parenting styles ‘authoritative’ and ‘over-involved’ are expected to have different effects.

Delay of gratification (resisting temptation)

Giving into temptation

Because of the overlap between the authoritative and over-involved parenting style, the first hypothesis now states that students from authoritative and over-involved homes will be less likely to give into temptation than students from authoritarian and neglectful-unengaged homes. To test this hypothesis a planned contrast test was carried out. This contrast tested for differences between the pair of the ‘authoritative’ and the ‘over-involved’ parenting styles and the pair of the ‘authoritarian’ and the ‘neglectful-unengaged’ parenting styles. The ANOVA revealed a significant main effect of ‘parenting style’ for ‘giving into temptation’ ($F_{3,432} = 2.888, p < .05$). The contrast test showed a reliable effect ($F_{1,432} = 8.216, p < .01$). Hypothesis 1a was confirmed. Figure 6.1 shows the mean differences between the four parenting styles of ‘giving into temptation’.

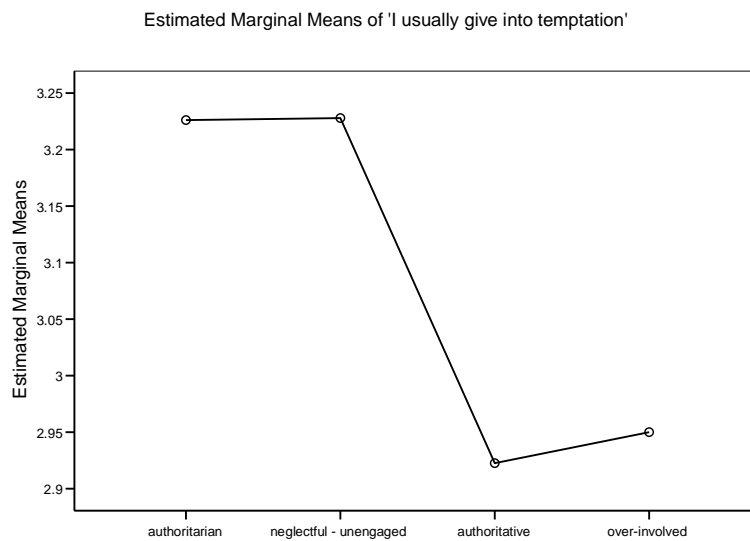


Figure 6.1 *Giving into temptation as a function of 'perceived parenting style'*

Saving strategy self-efficacy

Hypothesis 1b concerns adolescents' 'saving self-efficacy'. If self-efficacy is one of the measures related to authoritative parenting because of warmth, support, strictness, supervision, as well as autonomy granting, then students from authoritative homes and students who perceive their parents as over-involved, should also score higher on a self-efficacy measure in a saving context ('saving self-efficacy'). And indeed, the ANOVA revealed that the main effect of 'parenting style' was significant for 'saving self-efficacy' ($F_{3,432} = 10.012, p < .001$). To compare students from authoritative and over-involved homes with students from authoritarian and neglectful-unengaged homes, again a planned contrast test was used. The results showed a reliable effect ($F_{1,432} = 26.169, p < .001$). Hypothesis 1b was confirmed, since students from authoritative and over-involved homes scored higher on the 'saving self-efficacy' measure than students from authoritarian and neglectful-unengaged homes. Figure 6.2 shows the mean differences between the four parenting styles when looking at the adolescents' 'saving self-efficacy'.

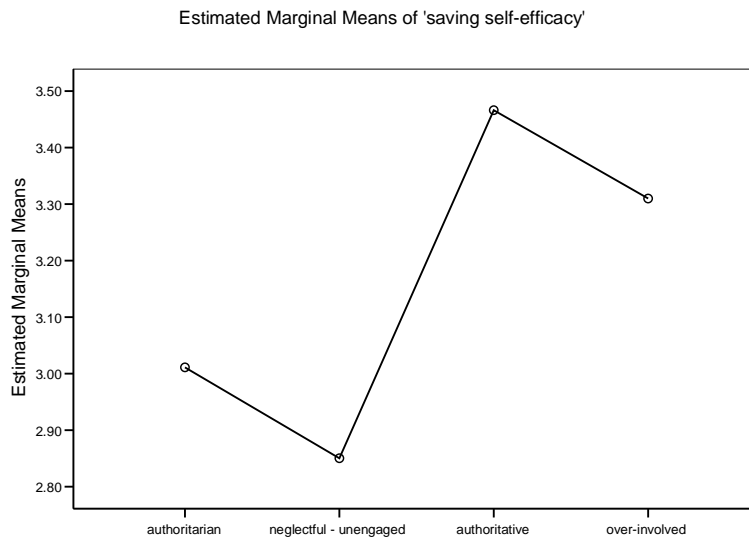


Figure 6.2 *Saving self-efficacy as a function of 'perceived parenting style'*

Attitudes

Saving struggle

Because of their advanced self-regulatory skills, students from authoritative homes and students from over-involved homes were expected to find saving easier than students from authoritarian and neglectful-unengaged homes (hypothesis 2a). The experience of fewer difficulties with saving should be reflected in lower scores on the attitude subscale 'struggle'. The ANOVA revealed that the main effect of 'parenting style' was significant for the attitude subscale 'struggle' ($F_{3,431} = 10.921, p < .001$). To test whether students from authoritative and over-involved homes declare to have fewer difficulties with saving than students from authoritarian and neglectful-unengaged homes, a contrast test was used. This test revealed a significant effect ($F_{1,431} = 22.873, p < .001$), confirming hypothesis 2a. Figure 6.3 illustrates the mean differences between the four parenting styles with regard to the attitude subscale 'struggle'.

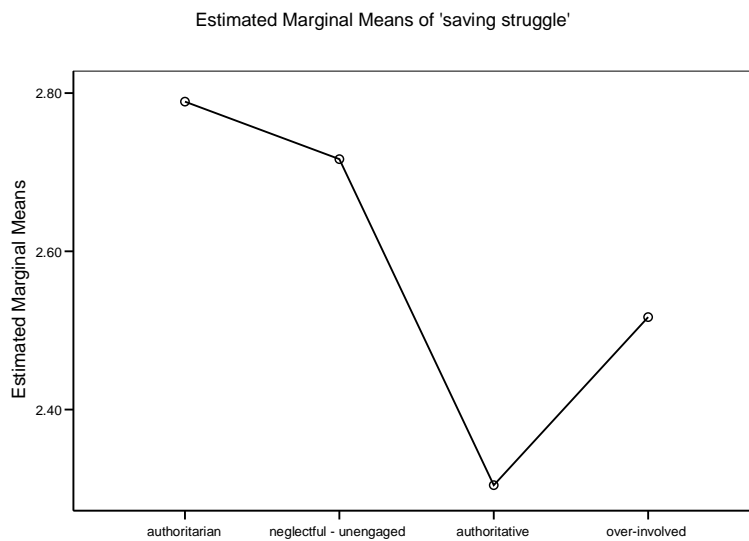


Figure 6.3 Attitude subscale 'struggle' as a function of 'perceived parenting style'

Saving is a good thing

It is further expected (hypothesis 2b) that should students from authoritative and over-involved homes really experience fewer difficulties with saving, then, compared to students from authoritarian and neglectful-unengaged homes, they might also think more positive about saving in general. In other words, they should score higher on the attitude subscale 'saving is a good thing'. The ANOVA revealed that the main effect of 'parenting style' was significant for the attitude subscale 'saving is a good thing' ($F_{3,431} = 6.317, p < .001$). Employing the contrast test, a significant difference was found between the students from authoritative and over-involved homes and those from authoritarian and neglectful-unengaged homes ($F_{1,431} = 15.029, p < .001$). This difference confirms hypothesis 2b. Figure 6.4 shows the mean differences between the four parenting styles with regard to the attitude subscale 'saving is a good thing'.

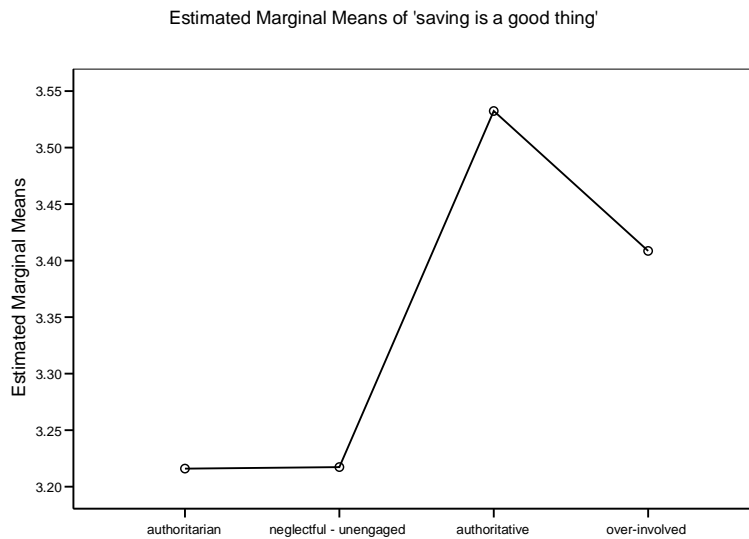


Figure 6.4 Attitude subscale 'saving is a good thing' as a function of 'perceived parenting style'

Saving pride

Hypothesis 2c stated that if students from authoritative and over-involved homes find saving easier than students from authoritarian and neglectful-unengaged homes, then, they might, as a result, also be more proud of (their) saving. The ANOVA revealed that the main effect of 'parenting style' was significant for the attitude subscale 'pride' ($F_{3,431} = 12.085, p < .001$). In addition and as expected, the contrast test (testing for a difference between the pair of the authoritative and over-involved parenting styles and the pair of the authoritarian and neglectful-unengaged parenting style) was significant ($F_{1,431} = 31.710, p < .001$). Figure 6.5 shows the mean differences between the four parenting styles when looking at the attitude subscale 'pride'.

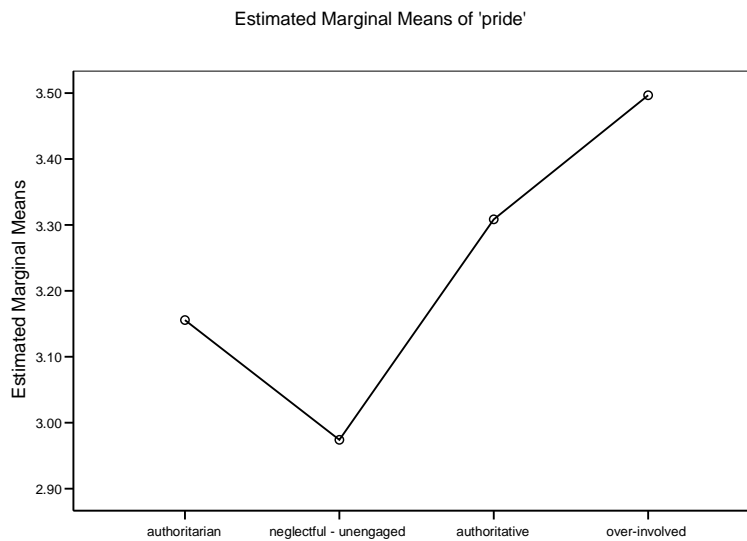


Figure 6.5 Attitude subscale 'pride' as a function of 'perceived parenting style'

Dependency on parents

Hypothesis 2d stated that students with authoritative parents rely on their parents less often than students with authoritarian and neglectful-unengaged parents because of the level of the child's independence that is promoted through the granting of autonomy. Because the parenting style dimension 'psychological control' has consistently been found to be correlated with dependency (Baumrind, 1978; Becker, 1964), only adolescents who perceive their parents as authoritative should score low on the attitude sub-scale 'dependency on parents'. This means that students from authoritative homes are expected to also rely less on their parents than students from over-involved homes. The ANOVA revealed that the main effect of 'parenting style' was significant for the attitude subscale 'dependency on parents' ($F_{3,431} = 3.358, p < .05$) and the contrast test that was used to compare students from authoritative homes with students from non-authoritative homes (all other homes) showed a reliable effect ($F_{1,431} = 9.349, p < .01$). Figure 6.6 illustrates this difference (confirming hypothesis 2d).

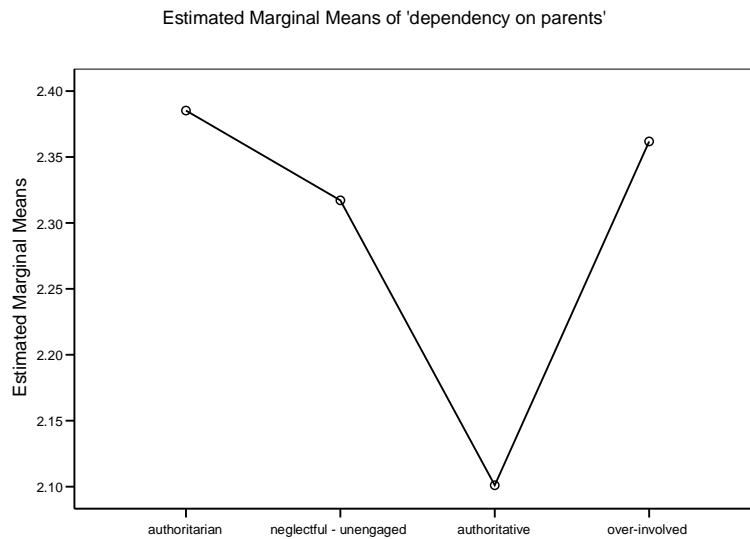


Figure 6.6 Attitude subscale 'dependency on parents' as a function of 'perceived parenting style'

Parents as guides

Because adolescents from authoritative homes and those from over-involved homes have parents who use reasoning when setting limits, hypothesis 2e stated that they will be more inclined to ask for guidance when it comes to saving than adolescents from other homes (authoritarian and neglectful-unengaged homes). Therefore, they should score higher on the attitude subscale 'parents as guides'. The ANOVA revealed a significant main effect of 'parenting style' for the attitude subscale 'parents as guides' ($F_{3,431} = 9.915, p < .001$). As expected, the contrast test (testing for a difference between the pair of the authoritative and over-involved parenting styles and the pair of the authoritarian and neglectful-unengaged parenting style) showed a reliable effect ($F_{1,431} = 28.644, p < .001$). Figure 6.7 illustrates the mean differences between the four parenting styles when looking at the attitude subscale 'parents as guides'.

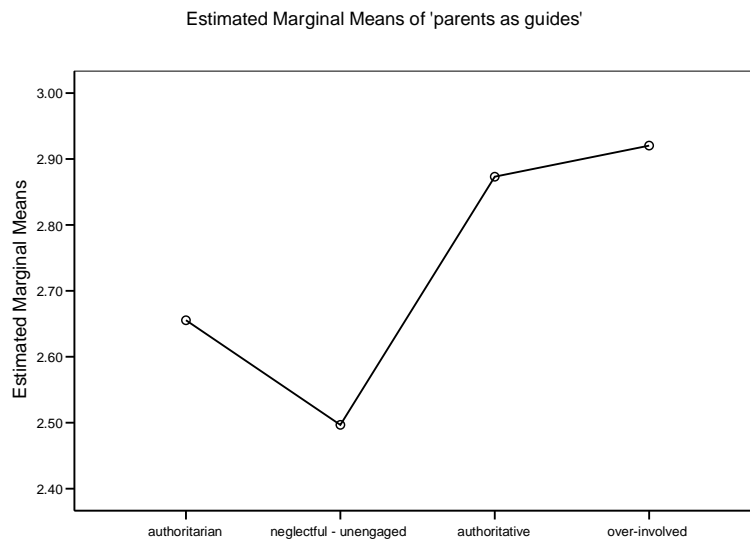


Figure 6.7 Attitude subscale 'parents as guides' as a function of 'perceived parenting style'

Psychological variables related to saving

Conscientiousness

Based on the fact that self-control is one of the core dimensions of the conscientiousness construct and the finding that an authoritative parenting style promotes self-control in children, hypothesis 3a stated that adolescents from authoritative homes should score higher on the conscientiousness measure than adolescents from non-authoritative homes. Because the core characteristics of the authoritative style also apply to the over-involved style (warm and supportive, autonomy granting, and firm control), the expected relationship between conscientiousness and authoritative parenting should also be observed between conscientiousness and over-involved parenting. This proved to be the case as can be seen from the result of the contrast test, which revealed that students from authoritative and over-involved homes are indeed more conscientious than students from authoritarian and neglectful-unengaged homes ($F_{1,429} = 19.868, p < .001$). Figure 6.8 shows the mean differences between the four parenting styles when looking at the adolescents' level of conscientiousness.

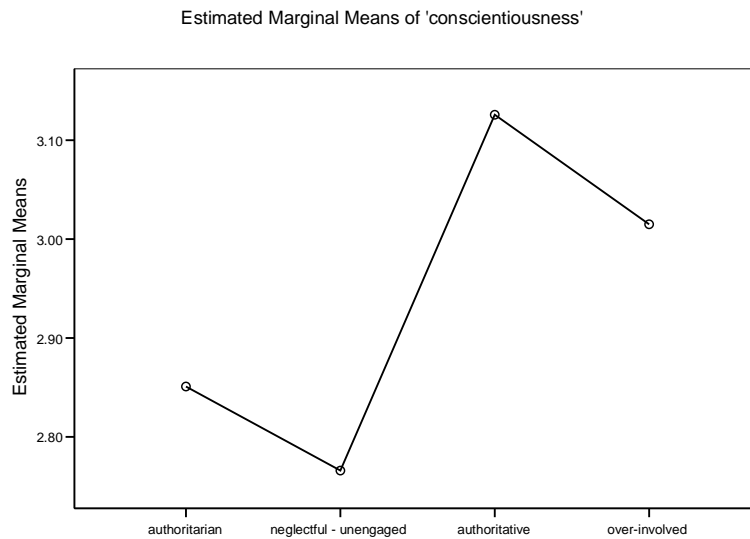


Figure 6.8 *Conscientiousness as a function of 'perceived parenting style'*

Future time perspective

If what Seginer, Vermulst, and Shoyer (2004) found is a reliable finding, it should be possible to also demonstrate that students from authoritative homes will be more future oriented than those from non-authoritative homes (hypothesis 3b). Again, because the key characteristics of authoritative parenting also apply to parents who are perceived as over-involved by their adolescent child, it is expected that there will also be a relationship between future orientation and over-involved parenting. What Seginer et al. (2004) found in their sample was true in this sample too. The contrast test revealed that students from authoritative homes and in this study also from over-involved homes are more future oriented than students from authoritarian and neglectful-unengaged homes ($F_{1,433} = 43.902, p < .001$). Figure 6.9 illustrates the mean differences between the four parenting styles when looking at 'future time perspective'.

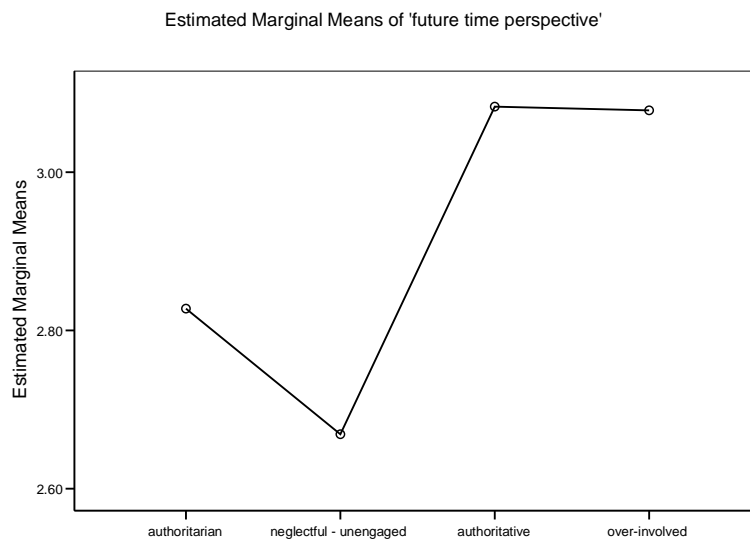


Figure 6.9 *Future time perspective as a function of 'perceived parenting style'*

Getting Larger Sums of Money

Saving by adjusting expenditure

Because adolescents from authoritative and over-involved homes are granted more autonomy, which means that their independence is promoted, it was expected that these young people also opt more frequently for 'saving by adjusting expenditure' (saved factor scores of Factor 1) as an independent way of getting larger sums of money than adolescents from authoritarian and neglectful-unengaged homes (hypothesis 4a). This expectation is further supported by the observation that students from authoritative and over-involved homes experience fewer difficulties with saving than students from authoritarian and neglectful-unengaged homes. The ANOVA revealed a significant main effect of 'parenting style' for 'saving by adjusting expenditure' ($F_{3,357} = 3.195, p < .05$). As expected, the contrast test (testing for a difference between the pair of the authoritative and over-involved parenting styles and the pair of the authoritarian and neglectful-unengaged parenting style) revealed a reliable effect ($F_{1,431} = 7.424, p < .01$) when testing this hypothesis. Figure 6.10 shows the mean differences between the parenting styles for the 'saving by adjusting expenditure' measure.

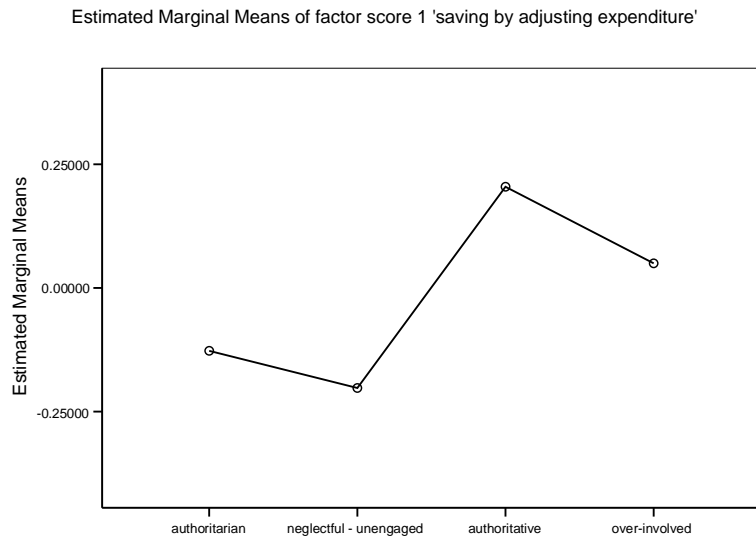


Figure 6.10 'Saving by adjusting expenditure' as a function of 'perceived parenting style'

Negotiate, borrow

The second hypothesis regarding the adolescents' choice of strategy when it comes to getting larger sums of money (hypothesis 4b) stated that adolescents who perceive their parents as authoritative less often rely on their parents than adolescents who do not describe their parents as authoritative. The idea behind this was that authoritatively raised children are granted more autonomy and that this fosters independent and self-contained action. To test this hypothesis, a contrast test was used (testing for a difference between the pair of the authoritative and over-involved parenting styles and the pair of the authoritarian and neglectful-unengaged parenting style). From the ANOVA no significant main effect for 'negotiate, borrow' became evident and also the contrast test was not significant ($F_{1,357} = .131$, n.s.). Figure 6.11 illustrates that students who perceive their parents as neglectful-unengaged, tend to negotiate less with their parents than students who perceive their parents as authoritarian, authoritative, or over-involved.

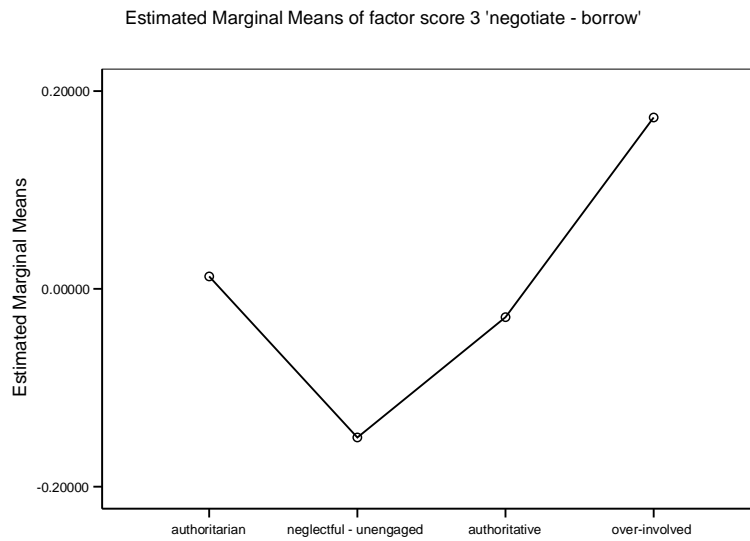


Figure 6.11 'Negotiate, borrow' as a function of 'perceived parenting style'

General Tendency to Save rather than Spend Money

The above reported findings all support the last hypothesis (hypothesis 5) that adolescents from authoritative and over-involved homes will have higher scores on the 'general tendency to save' measure than adolescents from authoritarian or neglectful-unengaged homes. This should be because they have been shown to be more conscientious, more oriented towards the future, they have advanced self-regulatory skills, which makes that they less often give into temptation and therefore experience fewer difficulties with saving. The results of Study 2 showed that all these measures are related to saving during adolescence. In order to test for this hypothesis, a planned contrast test to test for differences between the two pairs of parenting styles was used again. The ANOVA revealed a significant main effect of 'parenting style' for 'general tendency to save' ($F_{3,434} = 5.251, p < .01$) and the contrast test showed a reliable effect ($F_{1,434} = 13.935, p < .01$). Figure 6.12 shows the mean differences between the four parenting styles when looking at the adolescents' 'general tendency to save'.

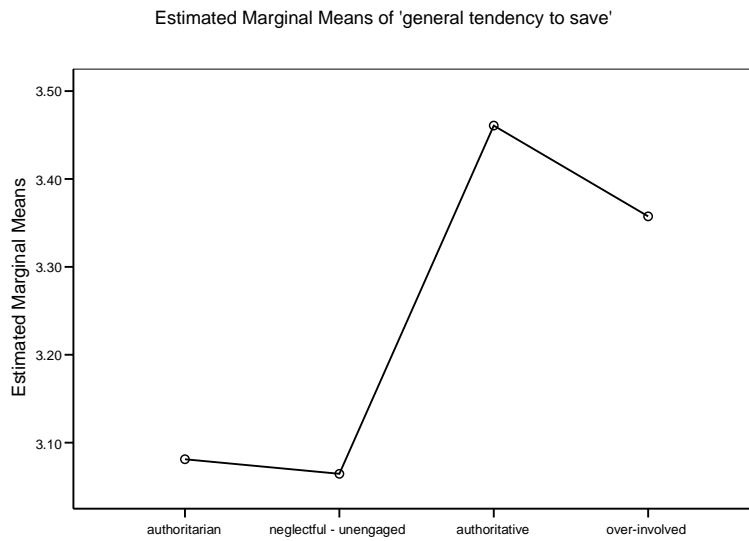


Figure 6.12 *General tendency to save as a function of 'perceived parenting style'*

6.2.4 Discussion

Study 3 has provided valuable information and empirical evidence about a number of relationships between perceived parenting style and selected variables that proved important for saving behaviour during adolescence in Study 2. Only one sub-part of one of the modified hypotheses (hypothesis 4b) was not confirmed.

The parenting styles

At the outset of the analysis, a cluster analysis revealed that in this sample, the group of permissive parents that has been found in the literature did not exist. Given that the sample is large and representative, this suggests that there is a distinct possibility that the range of parenting styles has changed over the past 20 years. Although there are several studies where a reasonable number of parents can still be classified as permissive or indulgent (Carlson, Laczniak, & Walsh, 2001; Nijhof & Engels, 2007), others have found that the permissive group was extremely small. An example of such a study in the USA is the recent investigation of the influence that parenting styles and level of Internet access in the home have on parenting mediation of online content and time spent on the Internet by Eastin, Greenberg, and Hofschire (2006).

The sample consisted of 520 single and married mothers of teenagers in public schools. The mothers were interviewed on the phone by a professional survey company using a computer-assisted telephone interviewing system (CATI). For their research, they adopted the parenting style measure created by Steinberg, Lamborn, Dornbusch, and Darling (1992). When they used the strictness and involvement measures to identify the four typological parenting styles, the group of permissive parents was so small ($N = 34$), that they removed the permissive category from all analyses. They refer to their finding as a limitation of the study. It is indeed possible, that permissive parenting is generally less acceptable and that they missed out on a permissive group because of social desirability. This could have happened, because they interviewed the mothers themselves. However, it could also be that the permissive parenting style is not only less acceptable now, but also less often used by parents in general. In Western countries, there has been a significant increase in the mean age at marriage (Lehnard & Neyer, 2006) and families are smaller than they were twenty years ago. There is also a prevalence of single parenthood (Gregg & Harkness, 2003) and single children. Single mothers have been found to focus on greater autonomy (Nielsen, 1999). In another recent study conducted in the UK, Leman (2005) investigated the relationship between parenting style and children's perceptions of the reasons behind adult moral rules. In his sample of 10- and 11-year-olds from two schools in a suburban area outside London, UK ($N = 100$), he identified authoritarian, authoritative, and permissive parenting styles (as perceived by the children). However, only 62 percent of the children's parents could be classified as clearly belonging to either the authoritarian, authoritative, or permissive style. A large group (38 percent) was not classified but labelled 'undifferentiated' and the permissive group was extremely small ($N = 9$). This shows that also in other parts of the UK, the permissive style has been less apparent than it has been two decades ago (in the USA).

Additionally, because the authoritative parenting style seems to be the one children benefit mostly from, sometimes, parents were just classified according to their authoritativeness (authoritative, somewhat authoritative, somewhat non-authoritative, non-authoritative) as opposed to their level of any other parenting style (Steinberg et al., 1992). So, these studies don't tell us whether there was a big group of parents that could be classified as permissive or not. Moreover, Weiss and Schwarz (1996)

distinguished between seven parenting types. One of their types was labelled 'non-directive' but not 'permissive'. Apparently, this group of parents did not match this style well enough to also be called so. What is more, to study the effect of an authoritative parenting style, sometimes, researchers only worked with measures of the dimensions (autonomy granting, demandingness, supportiveness) that were typical for this style (Strage & Brandt, 1999), without classifying the parents into parenting style groups at all.

In conclusion, the absence of the permissive parenting style is *not* a weakness or limitation of the study. On the contrary, this finding reflects changes in parenting style and the emergence of 'over-involved' parents. With the data collected for Study 3, perceived parenting style was assessed through asking the adolescents themselves. It is unlikely, that social desirability was an issue when it comes to characterising one's parents particularly with regard to the permissive style as might have been the case in the telephone study by Eastin et al. (2006). Although the sample seems to be representative of students in Year 9 in Devon, caution should be taken in generalising the finding to other regions of the UK.

Delay of gratification

The finding that the differences on the measure that tapped into resisting temptation were related to perceived parenting style as expected, confirms that adolescents who perceive their parents as authoritative (or over-involved) are more likely to have good self-regulatory skills than adolescents who perceive their parents as authoritarian or neglectful-unengaged (hypothesis 1a). This shows that the research findings reported by Morris (2003), Soward (2006), and Madigan (2005) for example, who investigated self-regulatory skills in relation to parenting style, are also meaningful when the research concerns the regulation of one's spending.

In addition, the relationship between the authoritative parenting style and adolescents' self-efficacy beliefs as integral part of adolescent well-being could be demonstrated in an economic context, since adolescents from authoritative and over-involved homes held saving self-efficacy beliefs that were more positive than the saving self-efficacy beliefs of adolescents from authoritarian and neglectful-

unengaged homes (hypothesis 1b). Apart from highlighting that there is a relationship between the behaviour of parents as perceived by the adolescents and the adolescents' ability to control his or her spending when tempted, this finding also emphasizes the importance of self-controlling techniques or self-regulatory skills for saving in general.

Attitudes

The finding that students from authoritative and over-involved homes scored lowest on the attitude subscale 'struggle' is in line with them being better at resisting temptation and having stronger saving self-efficacy beliefs. According to the data, during early adolescence, students who perceive their parents as authoritative or over-involved also seem to benefit from this parenting style in a saving context (hypothesis 2a). They seem to experience fewer difficulties with saving, which could be the result of them being better at handling temptation, for example.

The finding that adolescents from authoritative and over-involved homes displayed more positive attitudes towards saving (hypothesis 2b) and at the same time were more proud of their saving (hypothesis 2c) than adolescents from authoritarian and neglectful-unengaged homes, suggests that perceived parenting also affects the saving attitudes of adolescents in a way that is coherent with their saving behaviour.

The result of the planned contrast test for adolescents' attitude 'dependency on parents' (hypothesis 2d), provides clear evidence that adolescents from authoritative homes demonstrate more autonomous and independent thinking when being asked about their attitudes towards saving, than adolescents from all other homes. The expected finding that for this attitude measure, the group of students who perceived their parents as over-involved scored as high as the group of students who perceive their parents as authoritarian or neglectful-unengaged, is in keeping with the findings of other studies that demonstrated a relationship between psychological control and dependency (Baumrind, 1978; Becker, 1964). The psychological control dimension of parenting has almost exclusively been conceptualised as a negative form of control (Barber, 1996). With psychologically controlling pressures, parents do not respond adequately to the emotional and psychological needs of their child (Maccoby

& Martin, 1983). Note that the group of students from over-involved homes did not differ on any of the other measures from the group of students from authoritative homes. The impact of the difference in magnitude of the use of psychological control by the over-involved parents as compared to the authoritative parents is, in the context of saving, solely reflected in much higher scores of the adolescents from over-involved homes on the attitude subscale 'dependency on parents'. This is interesting from a developmental point of view and for the study of parenting effects itself.

The finding that adolescents from authoritative and over-involved homes tend to use their parents as guides more than adolescents from authoritarian and neglectful-unengaged homes was predicted (hypothesis 2e). It shows that a parenting style characterized by high levels of parental warmth and support can generally facilitate the seeking of parental support by adolescents, when the particular content is of economic nature (money management and saving).

Psychological variables related to saving

Based on the assumption that authoritative parenting fosters children's self-controlling skills (Baumrind, 1971; Patock-Peckham, et al, 2001; Morris, 2003; Soward, 2006; Madigan, 2005) and the notion that self-control is one of the core dimensions of the conscientiousness construct (Gough, 1957; Cattell, 1965; Roberts et al., 2005), a relationship between authoritative parenting and 'conscientiousness' was expected (hypothesis 3a). It is possible that the relationship found is mediated through the effect of authoritative parenting on children's self-control. However, this is speculation, since this has not specifically been tested.

The finding of the relationship between the authoritative parenting style (and in this study also the over-involved parenting style) and the adolescents' 'future time perspective' was expected (hypothesis 3b) and is in line with the findings reported by Seginer et al. (2004). While Seginer et al. investigated the processes through which this particular parenting style promotes a general orientation towards the future, the relationship found in my study does not tell us how perceived parenting style affects the 'future time perspective' of adolescents. However, the finding suggests that the

overall relationship is robust, since it was demonstrated with a different sample of adolescents at a different age.

Getting larger sums of money

The first of the two hypotheses that concerned the choices of adolescents regarding ways for getting larger sums of money (hypothesis 4a) was confirmed. This shows that authoritative and over-involved parenting as perceived by the adolescents is related to choosing to 'save by adjusting expenditure'. Because this option for getting larger sums of money can be considered the most autonomous of the options investigated, it is indeed possible that the parenting dimension 'autonomy granting' plays an important role in this.

Contrary to expectation, hypothesis 4b was not confirmed. Because of the high scores of adolescents who perceived their parents as over-involved, it is possible that this measure is not so much related to the parenting dimension 'autonomy granting' as expected, but to the parenting dimension 'psychological control'. Therefore, the finding can best be understood in line with hypothesis 2d, which was related to dependency. The adolescents who perceived their parents as over-involved scored highest on the 'negotiate, borrow' measure, probably because they depend on their parents most strongly. The adolescents who perceived their parents as neglectful-unengaged scored lowest on this measure. It is possible that they do rarely consider this option because they might in general not feel like approaching a parent who tends to be unengaged (at least in their view). The finding that adolescents from authoritative homes had scores in between those from neglectful-unengaged and over-involved homes could be a sign for a healthy balance between trust, being used to verbal give and take when limit setting, as well as low levels of dependency.

General tendency to save

The finding that adolescents from authoritative and over-involved homes scored higher on the 'general tendency to save' measure than adolescents from authoritative and neglectful-unengaged homes provides empirical evidence of a relationship

between perceived parenting style and the development of saving behaviour as a habit. Given the relationships found in Study 2 of this thesis and the findings that adolescents from authoritative and over-involved homes report to be more conscientious, more oriented towards the future, better at resisting temptation, with higher saving self-efficacy beliefs and fewer difficulties with saving, it is not surprising, that hypothesis 5 was confirmed by the data as well.

6.3 Summary

In sum, Study 3 provides empirical evidence of the connections between perceived parenting style and adolescent saving behaviour. Because of the overlap between the authoritative and over-involved parenting styles that emerged in my study all but one of the hypotheses were adapted. Subsequently, apart from one sub-part, all of the modified hypotheses were confirmed. This demonstrates that there are good reasons to believe that parenting style has a significant effect on a number of variables that are linked to adolescent saving behaviour in general and the development of saving behaviour in particular. Although it is not possible to establish cause and effect from the relationships demonstrated in Study 3 (as illustrated in Chapter 2, paragraph 2.4.1), the evidence provided in this chapter clearly attests that economic socialization processes and general socialization processes are linked and that an investigation of adolescent saving behaviour benefits from an approach that takes general socialization processes in the family context into account. The finding that the predicted relationships were confirmed for measures such as attitudes (parents as guides; dependency on parents), behaviours (general tendency to save), and beliefs (saving self-efficacy), suggests that overall, perceived parenting style is an important context variable for adolescent saving. In the following study, perceived parenting style will therefore also be taken into account. However, the focus will be on parental practices with regard to their adolescent child's money management and on the parents' attitudes towards their adolescent child's saving.

Chapter 7 - A Chip off the Old Block? The Role of Parents

7.1 Introduction

This chapter builds on the findings of the previous studies and aims to develop a better understanding of the influence perceived parenting style, parents' attitudes towards their adolescent child's saving and parents' money management practices have, on the development of saving behaviour during adolescence.

The first aim of Study 4 is to build links between the saving behaviour of adolescents and the behaviour of their parents. The study described in this final empirical chapter will provide detailed information about the effect of perceived parenting style on adolescents' saving behaviour in combination with what parents think (attitudes) and do (practices). For the investigation of parents' attitudes and practices, data will be collected from both parents of adolescents aged 13 to 14. This is the first time that such data has been collected. Therefore, the data used here is unique. This also means that this study will in parts be exploratory.

The second and main aim of Study 4 is to specify and test a model that accounts for the (indirect) impact of perceived parenting style and a number of parent and adolescent variables that have been selected both on theoretical grounds and what has been learned from the previous studies.

When Pelegrina, García-Linares, and Casanova (2003) investigated whether adolescents' academic competence is better predicted by the adolescents' or their parents' perceptions about parenting characteristics, they found that for certain measures it can be useful to consider both sources of information separately. In their study, parental involvement was such a measure. According to them, parental involvement is more objectively observable than for example parental acceptance. In addition, they assumed that involvement is more closely related to specific parental

practices in the educational environment. The acceptance measure on the other hand, was considered to assess feelings and emotions more than the involvement measure and feelings and emotions would be better measured by the adolescents themselves. Although overall, their results showed that the children's assessment of parenting characteristics tended to predict their own academic competence better than their parents' ratings, for this study, the finding that for particular measures a consideration of both sources of information separately can be an advantage is more relevant. It would for example be strange to ask adolescents about their parents' attitudes towards their own saving behaviour. In addition, for an investigation of the practices parents use (or do not use) to encourage saving behaviour in their adolescent child, the perspective of the parent needs to be taken into account. Furthermore, the parental perspective can be considered important because a given parenting style is not necessarily translated into the same behaviours by all parents (Bronfenbrenner, 1991). It is therefore an advantage to measure parenting practices directly rather than inferring them from parenting styles.

Parents' practices with money management specific goals have not yet been systematically investigated in relation to perceived parenting style or child's saving behaviour. To date, we do not know how effective parents are in trying to encourage saving in their (adolescent) child. We have even learned from the interviews conducted by Sonuga-Barke and Webley (1993) that the majority of the parents think that through pocket money, children have the opportunity to learn how to spend rather than save money. On the other hand, we have information that parents believe that recipients of pocket money or allowances should be encouraged to save at least part of it (Furnham, 2001). In his study, Furnham investigated parents' attitudes and behaviours with regard to pocket money in general (and not saving of pocket money in particular). Regression analyses were used to establish the most important determinants of these attitudes and behaviours. 'Parental involvement and education' was one of the factors Furnham found when exploring the underlying structure of the attitude items using a factor analysis. Another factor found was labelled 'parental liberalism' (pocket money was considered as a right and it should not be dependent on household chores or be withheld). He established that female, religious, left-wing adults with a good money management style favoured parental involvement and education most. For parental liberalism, he established that well educated parents

with low income and low scores on the 'money smart' measure were in favour of such freedom with regard to pocket money. The money smart measure is a measure from Bodnar (1997) that is meant to give parents an indication about their own money management style. In the regression analyses, Furnham (2001) used a number of dependent variables such as gender, age, education, income, occupational status, politics, religion, and own money management to investigate the most important determinants of parents' attitudes towards pocket money and allowances. The results showed that whilst the independent variables he had taken into account are certainly a good starting point, they did not explain much of the variance¹⁸ in parents' pocket money related attitudes and behaviours, nor were they powerful predictors of parents' pocket money related attitudes and behaviours. The following study is designed to specifically investigate parental attitudes towards the saving behaviour of their adolescent child and the practices they use to encourage saving in their adolescent child in relation to perceived parenting style and adolescent saving behaviour.

Steinberg, Lamborn, Dornbusch, and Darling (1992) investigated the impact of parenting practices on adolescent achievement in relation to authoritative parenting, school involvement, and encouragement to succeed. The results showed that parental encouragement and involvement had a stronger impact when parents were authoritative than it did when parents were not. Within families that were not authoritative, the encouragement and involvement of parents was unrelated to the school performance of the students, suggesting that it is not just what parents do, that matters but also the emotional context in which they do it. Subsequently, Darling and Steinberg (1993) proposed that parenting style can best be regarded in terms of providing a context in which socialization is facilitated (or undermined). They suggest that adolescents' willingness to be socialized is mediated through their parents' parenting style. Following their line of thought it could be that parents' practices to encourage saving are more effective when used in an authoritative (and over-involved) family environment than when used in an authoritarian or neglectful-unengaged family environment.

¹⁸ For five of the six multiple regressions, R^2 adj. was between 4 and 10 percent, for one multiple regression (explaining determinants of parental involvement), R^2 adj. was 18 percent.

For the exploratory part of the next study, the following research questions have been formulated:

- (1) What is the relationship between parents' attitudes towards their adolescent child's saving and perceived parenting style?
- (2) What is the relationship between the practices parents use and perceived parenting style? Parents who are perceived as authoritative might, for example, argue less with their adolescent child than parents who are not perceived as authoritative, because their child is used to parental limit setting. Parents who are perceived as neglectful-unengaged may control their adolescent child's spending less than parents who are not perceived as neglectful-unengaged, because they generally do not control their child much.
- (3) Do parental attempts to encourage saving have more impact within families that are perceived as authoritative (and over-involved) by their adolescent child than within families that are perceived as authoritarian and neglectful-unengaged?
- (4) Is it possible to provide further empirical evidence for a relationship between the future time perspective of parents and the future time perspective of their adolescent child, as has been demonstrated by Webley and Nyhus (2006)?
- (5) What is the relationship between the socio-economic environment of the adolescent, parents' attitudes towards adolescent saving, their practices and psychological variables and their adolescent child's saving behaviour?

Based on the findings from the previous studies, as well as on the exploratory part of Study 4, variables will be selected to specify a model that illustrates the relationships between the behaviour and attitudes of the parents and the saving behaviour and attitudes of their adolescent child. In addition, for this process, the results of several studies by other researchers will be taken into account. Webley and Nyhus (2006) found, for example, that the amount of savings a child had was related to the saving behaviour of the parents, the economic socialization of the parents, the level of the father's conscientiousness, and the overall household income. The fact that household income was associated with the amount of money in a child's saving account is not surprising (see Chapter 3, paragraph 3.4.1) given that money in a child's saving account is most likely an amount of money that has been saved on

behalf of the child, by parents or other relatives (Sonuga-Barke & Webley, 1993). More directly related to the adolescents' disposable income is the finding that family income and family structure seem to be associated with receiving an allowance (Mortimer, Dennehy, Lee, & Finch, 1994; Barnet-Verzat & Wolff, 2002) as discussed in Chapter 2 (paragraph 2.3.1). To date, it is not clear, whether and how these variables are related to adolescent saving and therefore, they will be included in the parent questionnaire. Depending on whether they are linked to the saving behaviour of adolescents, it will be decided whether they should be included in the model or not. This also applies to the level of education (Furnham & Thomas, 1984b; Lewis & Scott, 2003) and the working status (West, Sweeting, Young, & Robins, 2006) of the parents.

7.2 Parental practices to encourage saving

Parents' encouragement of their (adolescent) child's saving behaviour and the behaviour of parents to facilitate their (adolescent) child's saving success can be regarded as particular parenting practices with money-management-specific goals. It should be noted that it is possible for parents to use the same practice when it comes to their child's saving, while their general parenting style as perceived by the adolescents differs greatly.

In his study of parental attitudes to pocket money and allowances for children, Furnham (2001) referred to a number of self-help books aimed at parents who would like to know more about how to teach their children about economic matters (such as money and jobs). The two books by Bodnar (1996, 1997) and the collection of creative ways to teach children about money by Estess and Barocas (1994) include a number of practices parents can use to encourage saving behaviour in their child. To the best of the researcher's knowledge, the practices parents use to encourage saving behaviour have not yet been investigated in relation to the actual saving behaviour of the children of those parents who use any of these practices. The following study will be the first to examine the links between what parents do and what their children do, with regard to saving money.

To develop measures that tap into the practices parents could use to encourage saving in their (adolescent) child, information from self-help books by Bodnar (1996, 1997), Estess and Barocas (1994), as well as the questionnaire used by Furnham (2001), were taken as a starting point. Pilot Study 4 with 80 parents of 13- to 14-year-old children was carried out to establish the most suitable set of questions and to explore the underlying structure of the practices they use to foster saving behaviour in their (adolescent) child (the questionnaire of Pilot Study 4 is presented in Appendix 5).

The results of Study 4 will provide detailed information about the practices parents apply to encourage saving and their attitudes towards adolescents' saving in general. In addition, whether their practices and attitudes are related to 'perceived parenting style' and the actual saving behaviour of the adolescents will be part of this examination. It is expected that the measures included in the parent questionnaire will considerably improve our understanding of what role parents play in the process of acquiring saving skills when young. Moreover, the results of Study 4 will demonstrate the (indirect) impact of perceived parenting style and a number of parent and adolescent variables on the saving behaviour of adolescents. The model that will be tested in this final study will illustrate the relationships that exist, when the saving behaviour of adolescents is investigated in the social context of the family.

7.3 Study 4

7.3.1 Participants

The study comprised a cross-sectional survey design in which participants (students of Year 9 and their parents) completed a questionnaire. The sample consisted of 94 students together with their mothers and fathers (94 mothers and 94 fathers).

Almost 30 percent of the mothers were working full-time, around 60 percent were working part-time (either employed or self employed) and about eight percent were looking after the family or home. Approximately eight percent of the mothers had no formal qualification, about 40 percent had finished their formal education with either GCSE-level, CSE- or O-level, five percent had A-levels, about 25 percent had

professional or vocational training, nearly 15 percent had a university degree, and five percent had a university higher degree.

Eighty-five percent of the fathers were working full-time and about seven percent were working part-time (either employed or self employed). One father was looking after the family or home, one was retired, one a student, and three were long-term sick or disabled. The level of education was fairly similar to that of the mothers: almost 14 percent had no formal education, around 35 percent had either GCSE-level, CSE- or O-level, five percent had A-level, about 25 percent had professional or vocational training, nearly 14 percent had a university degree, and almost eight percent had a university higher degree.

Of all the parents in the sample, 10 were cohabiting, 80 were married, two were separated, and two were divorced. The sample can therefore not be regarded as representative of the British population, but it might well be representative of intact families.

Procedure

The questionnaires for the parents were distributed via the students who took part in Study 3. The questionnaires had a cover letter (see Appendix 6) attached to it, explaining how a family could take part and what a family would receive and could win, given that all members of the family that were invited would fill out the enclosed questionnaires and return them to the University using Freepost envelopes provided. In collaboration with Ellen Nyhus (University of Agder, Norway) and Paul Webley (School of Oriental and African Studies, UK) additional data from grandparents in the UK were collected for the research project 'Grandparents, parents, and children: how approaches to economic life are transmitted across the generations'. This means that for Study 4 and for the British part of the research project by Nyhus and Webley (2005), 446 students were invited to forward a questionnaire pack to their parents. After having been told that parents would receive questionnaires for themselves and their own parents, as well as having heard what the incentives were, three students decided to not deliver their questionnaire package to their parents. Of the parents who received an invitation to participate in the study,

121 families got involved and after 6 weeks, 48 families had fully completed their set. A complete set meant that the grandparents of the students in the study had taken part as well. For Study 4 of this thesis, questionnaires from both parents were sufficient. Two weeks after the parents had received their questionnaire pack, a first reminder letter (see Appendix 14) was sent out via the schools involved. Two more weeks later, those who had started to participate, received another reminder letter that was more specific and personalised (see Appendix 15). In addition, to raise the students' awareness of the study, posters were put up for a couple of weeks, on the doors of all classrooms of students in Year 9 in both schools (see Appendix 16). Twice, the researcher reminded the students in person (once in class and once during assembly) and also their teachers reminded them at the beginning of the week before the deadline. The result of this data collection procedure was a response rate of 21 percent for Study 4¹⁹. Ninety-four questionnaires were completed by students and both parents. Table 7.1 shows the descriptive statistics for the adolescents and Table 7.2 shows the descriptive statistics for their parents.

Table 7.1 *Descriptive statistics for adolescents by college*

| Community College | N | Average age (in years) | Gender | | Average income (in £) | |
|-----------------------------------|----|---------------------------|--------|--------|---------------------------|--------------|
| | | | Male | Female | Pocket money or allowance | Money earned |
| Queen Elizabeth Community College | 55 | 13.57 | 23 | 32 | 22.29 | 28.42 |
| Tiverton High School | 39 | 13.51 | 23 | 16 | 19.36 | 47.52 |
| Total | 94 | 13.51 | 46 | 48 | 21.08 | 36.00 |

Table 7.2 *Descriptive statistics for parents by college*

| Community College | N | Average age (in years) | | Accommodation as stated by fathers (in percent) | | | Net household income per month (in £) |
|-----------------------------------|-----|---------------------------|--------|---|--------|-------|--|
| | | Mother | Father | owned | rented | other | |
| Queen Elizabeth Community College | 110 | 43.00 | 45.05 | 83.6 | 9.1 | 1.8 | 1750 - 2100 |
| Tiverton High School | 78 | 41.13 | 44.18 | 69.2 | 23.1 | 5.1 | 1750 - 2100 |
| Total | 188 | 42.22 | 44.69 | 77.7 | 14.9 | 3.2 | 1750 - 2100 |

¹⁹ The response rate for the research project by Nyhus and Webley was 10.8 percent in the UK

Compared to the sample of Study 3, the group of parents perceived as being neglectful-unengaged is slightly smaller now (15 percent in Study 4 versus 18 percent in Study 3). In addition and as one might expect, compared to Study 3, more parents in the sample of Study 4 are perceived as being authoritative (38 percent in Study 4 versus 32 percent in Study 3). The distribution of perceived parenting style across the sample can be found in Table 7.3.

Table 7.3 *Distribution of parenting style as perceived by the adolescent across the sample*

| | perceived parenting style | | | | Total | Missing | Total |
|---------------------|---------------------------|----------------------|---------------|---------------|-------|---------|-------|
| | Authoritarian | Neglectful-unengaged | Authoritative | Over-involved | | | |
| Number of cases (N) | 24 | 14 | 36 | 19 | 93 | 1 | 94 |
| N in percent (%) | 25.53 | 14.89 | 38.30 | 20.21 | 98.94 | 1.06 | 100 |

This reveals that the parents who took part in this study are more engaged than the parents of the students who took part in Study 3 (systematic attrition bias²⁰). One would expect such a shift since these parents have demonstrated their concern for their child also through taking part (and taking the trouble of filling out a questionnaire that was six pages long). The distribution of the perceived parenting styles in this particular sample should be kept in mind when interpreting the results.

7.3.2 Material

The student questionnaire used for Study 4 was the same as the one used in Study 3 and will not be described here again. For the parents, a questionnaire, in parts mirroring the student questionnaire, was designed to investigate their level of conscientiousness and future time perspective, their attitudes towards children's saving, their own money management, and their general tendency to save rather than spend money (an example of the parent questionnaire can be found in Appendix 17).

At the beginning of this questionnaire, parents were asked a number of non-intrusive personal questions about their age, gender, relationship with the child that was taking

²⁰ In order to prevent attrition bias, as suggested by Mason (1999), incentives were used, and parents as well as adolescents were frequently reminded of the study.

part in the study, current situation regarding employment, level of education, and marital status, followed by 23 questions about how they manage their adolescent child's (pocket) money. The pocket money section started with enquiries about a regular sum of money given on a set day (pocket money) and its usage followed by questions about arrangements for money given irregularly. Furthermore, parents were asked to indicate to what degree their child was free to decide how this money is spent, whether they would expect their child to complete any household chores for it, and whether they would encourage their child to save and earn money themselves. The next section consisted of 25 questions about the practices parents might use to encourage their child's saving behaviour, followed by 19 questions about their attitudes towards their child's saving behaviour and their child's use of pocket money in general. Both these measures (practices and attitudes) were devised by means of Pilot Study 4²¹. In addition to these, parents had to fill out a section on psychological measures such as their level of conscientiousness and future time perspective. Section 4 of the questionnaire included pocket money and money management related questions about one's own childhood²². The questionnaire finished with a paragraph on financial circumstances. These questions were put towards the end of the questionnaire because they could have been regarded as intrusive (and therefore off-putting). It was hoped and expected that having come so far, a parent would just leave out questions they were uncomfortable with as opposed to not participating at all.

Measures

Parental practices to encourage children to save

Thirty-three items were developed to match tips and advice given to parents in a variety of (American self-help) books for parents (Estess & Barocas, 1994; Bodnar, 1996; 1997). These had been piloted in search for an underlying structure and to test for their usability, appropriateness and reliability. Four sub-groups were identified: 'talk and argue', 'support', 'encourage', 'interfere', and 'control' (measures can be found in Appendix 18). Example items that tap into 'talk and argue' are 'I talk about

²¹ Pilot Study 4 was conducted with 80 parents (65 mothers and 35 fathers) of adolescents (mean age = 13 years).

²² This section was part of the research project by Nyhus and Webley and will not be used/ analysed here.

ways to limit spending.’ and ‘I often argue with my child about money’. Example items for ‘support’ are ‘I remind my child of his/her current saving goal when new ideas for spending come up.’ and ‘I take her/him to the bank to deposit her/his savings together.’. Example items of the subscale ‘control’ are ‘I restrict my child’s spending.’ and ‘I monitor my child’s spending behaviour’. The composite measure ‘interfere’ is the mean of ‘I lend money to my child when s/he needs it.’ and ‘If I lend money to my child, I turn a blind eye when it comes to them paying me back’. For the mothers, the alpha reliability estimates of these five subscales ranged from .66 to .78 (Ns varied between 87 and 90). For the fathers, the alpha reliability estimates of the subscales ranged from .68 to .81 (Ns varied between 85 and 91). Parents were asked whether they have done any of the ways presented in this section of the questionnaire in the past or whether they do any of these at the moment (1: no, never; 2: yes, but rarely; 3: yes, sometimes; 4: yes, often; 5: yes, most of the time).

Parental attitudes to children’s saving and use of money

Nineteen items were selected from the ‘saving attitude scale’ designed for Study 2 and Study 3 and rephrased so as to mirror the students’ attitudes but from the perspective of a parent. Four of the five subscales were included (see Appendix 19). These were ‘saving is a good thing’, ‘pride’ (pride in child’s saving), ‘dependency on parents’ (protection), and ‘parents as guides’ (educators). The ‘dependency on parents’ item ‘I think saving money is not necessary as long as you live at home and your parents support you financially.’ from the students questionnaire was for example used in the parent questionnaire as an item of the ‘protection’ subscale with the wording ‘I think it is not necessary for children to save money as long as they live at home and are financially supported by their parents.’. ‘I don’t need to save because my parents buy me the things I like’ was rephrased into ‘My child doesn’t need to save up for anything because I buy her/him the things s/he likes’ for use with parents. For mothers, the reliability of the subscale pride was low (alpha = .58, N = 93). The reliabilities of the remaining three subscales were in the range of .60 and .73 (Ns varied between 89 and 93). The reliabilities of the four subscales of the fathers were in the range of .65 and .78 (Ns varied between 89 and 91). The response scale

was similar to the one used with the students (1: strongly disagree; 2: disagree; neither agree nor disagree; 4: agree; 5: strongly agree).

Conscientiousness

To measure conscientiousness in parents, the 10 items from the International Personality Item Pool were used. An example item reads 'I pay attention to detail'. Parents were asked to describe themselves according to how true each of the statements was for them (1: not at all like me; 2: not like me; 3: somewhat like me; 4: like me; 5: very much like me). The internal reliability of this instrument as a measure for both mother's and father's conscientiousness was good (mothers: N = 86; alpha = .83; fathers: N = 86; alpha = .82).

Time perspective

Items included to measure present (hedonistic) and future time perspective in parents, were taken from the original 21 items developed by Zimbardo and Boyd (1999). This section was similar to the one used with the students, apart from the wording of the items, because this time, the scales were used as originally designed for adults. The response scale was similar to the one used with the conscientiousness measure (see above). For both, mothers and fathers, the internal reliability of the future time perspective scale and the present (hedonistic) time perspective scale was in the range of .75 and .80 (N varied between 90 and 91).

General money management

Ten questions on the parents' general money management, financial situation, and financial planning were included. Of these, nine questions were taken from the DNB Household Survey questionnaire (2004). Two questions were included to tap into the parents' general tendency to save.

7.3.3 Results

Descriptive statistics

Pocket money management and child's income

Answers given to the questions about the income of the child (questions that were related to pocket money and bank accounts) revealed that according to the mothers, 75 percent of them are mainly involved with pocket money and 20 percent of the fathers are. According to the fathers, 20 percent of them are mainly involved with the pocket money or allowance of the child and only 62 percent of the mothers. Eight percent of the fathers said that both would be equally involved, while only four percent of the mothers said so. Despite these small discrepancies, it is clear that in the majority of the cases, it is the mother who deals with the child's pocket money.

When the parents were asked about the amount of pocket money or allowance given to the adolescent and the frequency with which this pocket money or allowance is given, answers given by mothers and father roughly matched. On average and according to both parents, adolescents who receive their pocket money or allowance once a month (almost 40 percent of those receiving pocket money) are given around 17.50 pounds per month, while adolescents who receive their pocket money or allowance weekly (almost 50 percent of those receiving pocket money) end up with an average of 22 pounds per month.

For almost 50 percent of those who do get pocket money or an allowance (80 percent according to mothers; 60 percent according to fathers), the pocket money or the allowance was given without being dependent on doing household chores. For around 40 percent, the pocket money or the allowance was partly dependent on doing household chores. For eight percent, pocket money or allowance was entirely dependent upon household chores.

For some children (a minority of around 12 percent), the pocket money or the allowance is transferred directly into a bank account. According to the mothers, 75 percent of the adolescents in the sample do have access to a bank account. In addition, 80 percent do have a savings account. For 35 percent of the adolescents,

parents had opened the bank account when the child was born or one year old. By the age of 10, 80 percent of the adolescents in the sample had a bank account.

According to the parents, a majority of the adolescents has or had a piggy bank. For round 35 percent of the adolescents, parents claimed that the piggy bank was given to the child at birth or when the child was one year old. However, the peak for piggy bank introduction lay around the age of five. For nearly 35 percent of the adolescents, a piggy bank was arranged between the age of five and eight.

The majority (around 70 percent) of the parents who give pocket money indicated that they had not agreed upon what the pocket money or the allowance should be used for in advance. With regard to how the child should organize his or her allowance or pocket money, 40 percent of the parents said they left it up to their child whether she or he saves any money, and around 30 percent said they do encourage their child to save a bit of the allowance or the pocket money. Another 15 percent said they do encourage their child to regularly save some of the money received.

Overall, for the measures described above, the responses between mothers and fathers corresponded reasonably so that it can be assumed that they provide a good picture of the pocket money circumstances of the adolescents in the sample.

Parent variables and perceived parenting style

For each parenting style cluster, the means and standard deviations for the measures obtained from parents are given in the table below.

Table 7.4 Means and Standard Deviations for parent variables across parenting style

| | Authoritarian | | Neglectful-unengaged | | | | Authoritative | | | | Over-involved | | | | | | |
|--------------------------------|---------------|-----|----------------------|-----|--------|-----|---------------|-----|--------|-----|---------------|-----|-------------|-----|-------------|-----|--|
| | Mother | | Father | | Mother | | Father | | Mother | | Father | | Mother | | Father | | |
| | M | SD | M | SD | M | SD | M | SD | M | SD | M | SD | M | SD | M | SD | |
| Psychological variables | | | | | | | | | | | | | | | | | |
| conscientiousness | 3.77 | .57 | 3.36 | .67 | 3.38 | .59 | 3.42 | .64 | 3.77 | .57 | 3.51 | .58 | 3.99 | .56 | 3.59 | .45 | |
| future time perspective | 3.54 | .60 | 3.22 | .58 | 3.47 | .52 | 3.41 | .84 | 3.54 | .47 | 3.46 | .54 | 3.62 | .50 | 3.50 | .35 | |

| | | | | | | | | | | | | | | | | |
|-----------------------------|-------------|-----|-------------|-----|-------------|-----|-------------|------|-------------|-----|-------------|-----|-------------|-----|-------------|------|
| present time perspective | 2.94 | .64 | 2.97 | .57 | 3.28 | .40 | 3.22 | .64 | 2.87 | .56 | 2.90 | .60 | 2.84 | .56 | 2.90 | .40 |
| Parental practices | | | | | | | | | | | | | | | | |
| talk-argue | 3.02 | .80 | 2.50 | .82 | 2.70 | .76 | 2.59 | .87 | 2.52 | .74 | 2.44 | .79 | 2.98 | .73 | 2.82 | 1.04 |
| encourage | 2.57 | .76 | 2.05 | .84 | 2.42 | .82 | 2.16 | .81 | 2.52 | .93 | 2.27 | .90 | 2.61 | .71 | 2.17 | .64 |
| support | 2.97 | .73 | 2.48 | .85 | 3.14 | .96 | 2.52 | 1.03 | 3.03 | .78 | 2.66 | .84 | 3.38 | .66 | 2.44 | .68 |
| control | 3.34 | .72 | 2.60 | .98 | 2.73 | .94 | 2.67 | 1.05 | 3.20 | .73 | 2.81 | .94 | 3.24 | .55 | 2.80 | .77 |
| interfere | 2.35 | .97 | 2.03 | .73 | 2.13 | .80 | 2.02 | .85 | 1.99 | .75 | 2.15 | .76 | 2.07 | .78 | 2.21 | .96 |
| Attitudes | | | | | | | | | | | | | | | | |
| saving is a good thing | 4.23 | .56 | 4.08 | .58 | 4.14 | .59 | 4.29 | .51 | 4.17 | .48 | 4.05 | .59 | 4.22 | .66 | 3.97 | .68 |
| pride in child's saving | 4.23 | .46 | 4.19 | .51 | 4.26 | .49 | 4.00 | 1.18 | 4.13 | .52 | 3.95 | .51 | 4.14 | .56 | 3.91 | .57 |
| protect (dependency) | 2.34 | .56 | 2.32 | .52 | 2.26 | .57 | 2.27 | .66 | 2.38 | .58 | 2.45 | .60 | 2.34 | .66 | 2.44 | .80 |
| educate (parents as guides) | 3.89 | .64 | 3.76 | .37 | 3.80 | .47 | 3.84 | .62 | 3.97 | .43 | 3.77 | .65 | 4.05 | .41 | 3.81 | .42 |

The highlighted (bold) numbers mark significant differences between mothers and fathers in that particular cluster. In all these cases the mothers scored higher than the fathers.

Attitudes and practices

Adolescents' attitudes towards saving: parent measures

The correlations between the attitudes of the parents towards the saving behaviour of their adolescent child and the adolescents' own attitudes towards saving are shown in Table 7.5.

Table 7.5 *Relationships between attitudes (adolescents and parents)*

| Adolescent attitudes | 'saving is a good thing' | | 'pride' | | 'protection' | | 'educator' | |
|--------------------------|--------------------------|--------|---------|--------|--------------|--------|------------|--------|
| | Mother | Father | Mother | Father | Mother | Father | Mother | Father |
| 'struggle' | .216* | | | | | | -.286** | |
| 'saving is a good thing' | | | | | | | | |
| 'pride' | | | .266** | | | | | |
| 'dependency' | | | | | .291** | .314** | | |
| 'parents as guides' | | | | | | | .280** | |

**Correlation is significant at the 0.01 level (2-tailed).

*Correlation is significant at the 0.05 level (2-tailed).

Table 7.5 reveals that the difficulties adolescents experience with saving are negatively correlated with their mother's attitude 'educator'. In other words, the more positive a mother is about giving guidance and advice, the less the adolescent seems to struggle with saving. In addition, the higher the scores of both parents on the attitude subscale 'protection', the higher also seems the score of their child on the attitude subscale 'dependency'.

In addition to the relationships presented in Table 7.5, correlations were used to investigate the associations between parents' practices to encourage saving behaviour in their adolescent child and the adolescents' attitudes towards saving. These analyses revealed one significant and negative relationship between the attitude subscale 'saving is a good thing' and the practice 'interfere' when used by mothers ($r = -.218, p < .05$). The more a mother interferes with saving, the less positive the attitude towards saving of the adolescent child is. They also revealed significant relationships between mother's future time perspective and adolescents' saving attitude subscales 'struggle' ($r = -.225; p < .05$) and 'saving is a good thing' ($r = .229, p < .05$). Future oriented mothers tend to have children who score low on the attitude subscale 'struggle' and high on the attitude subscale 'saving is a good thing'.

Parents' attitudes and practices and perceived parenting style

When parents' attitudes and practices were looked at across the four parenting styles as perceived by the adolescents, for two of the practices used by mothers, significant effects were found. These were in the direction as expected (although at the outset of the study it was not expected that the effects would only be found for measures obtained from mothers).

The ANOVA revealed that the main effect of 'perceived parenting style' was significant for the mother's practice 'argue-talk' ($F_{3,89} = 2.752, p < .05$) and the contrast test that was used to compare students from authoritative homes with students from non-authoritative homes (all other homes) showed a reliable effect ($F_{1,89} = 5.584, p < .05$). Figure 7.1 illustrates this difference.

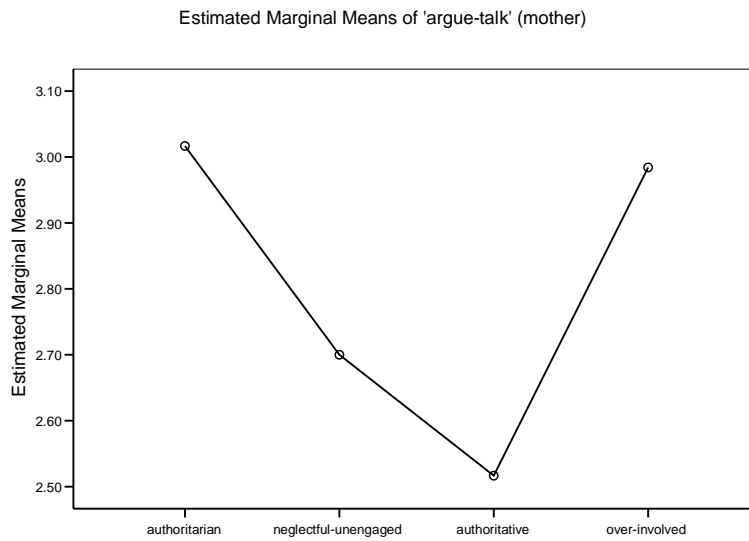


Figure 7.1 *Mothers' practice 'argue-talk' as a function of 'perceived parenting style'*

The second ANOVA revealed that the main effect of 'perceived parenting style' was not significant for the mother's practice 'control' ($F_{3,89} = 2.230$, n.s.) but the contrast test that was used to compare students from neglectful-unengaged homes with students from all other homes showed a reliable effect ($F_{1,89} = 6.258$, $p < .05$). Figure 7.2 illustrates this difference.

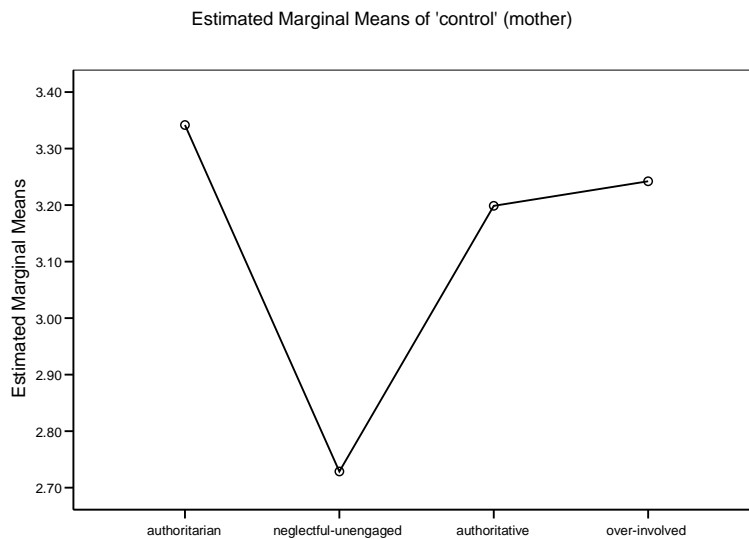


Figure 7.2 *Mothers' practice 'control' as a function of 'perceived parenting style'*

No effects were found of 'perceived parenting style' for parents' attitudes towards their adolescent child's saving.

Saving behaviour

Parents' general tendency to save

Parents were asked a general question about how they dealt with their money and another question about how difficult they find it to control their spending. When looking at the associations between these two items and parents' conscientiousness and future time perspective, only fathers' conscientiousness was significantly correlated with fathers' general tendency to save money that is left over after having paid for food, rent or mortgage, and other necessities ($r = .232, p < .05$). In addition, mothers' conscientiousness was significantly correlated with mother's future time perspective ($r = .548, p < .01$) and so was fathers' conscientiousness with fathers' future time perspective ($r = .684, p < .01$). Furthermore, there was a significant positive relationship between mother's and father's general tendency to save ($r = .336; p < .01$) and mother's and father's difficulties with expenditure control ($r = .362; p < .01$).

Adolescents' income and general tendency to save: socio-economic environment

Correlational analyses were carried out to examine whether family income and parents' level of education were related to adolescents' disposable income and their general tendency to save. As Table 7.6 shows, no significant relationship was found for these two variables.

Table 7.6 *Correlations between household income, parents' level of education, adolescents' income and adolescent saving*

| Correlations | Income (standardized) | General tendency to save |
|--|-----------------------|--------------------------|
| Household income (according to mother) | .154 | -.005 |
| Household income (according to father) | .128 | .026 |
| Level of education (mother) | -.016 | -.014 |
| Level of education (father) | -.022 | .006 |

** . Correlation is significant at the 0.01 level (2-tailed).

* . Correlation is significant at the 0.05 level (2-tailed).

There were minor differences between family status as reported by mothers and fathers. Because the majority of mothers was found to be dealing with pocket money matters, ANOVA was used to examine whether family structure as reported by mothers was related to adolescents' disposable income and their general tendency to save. The ANOVA revealed no significant main effect of 'family structure' for 'income' ($F_{2,89} = .601$, n.s.). In addition, the ANOVA revealed no significant effect of 'family structure' for 'general tendency to save' ($F_{2,91} = 1.086$, n.s.). While adolescents with single, separated, or divorced parents received slightly more money than adolescents with cohabiting parents and less money than adolescents with married parents, the differences were not significant. With regard to adolescents' general tendency to save, adolescents with single, separated, or divorced parents scored higher than those with parents who were cohabiting or married, but again, the difference was not significant. It should be noted that the sample in the main is representative of intact families, which resulted in unequal cell sizes (there were only 4 parents who were single, separated, or divorced).

To examine whether mother's working status was related to the disposable income of adolescents and their general tendency to save, the three groups full-time, part-time, and no employment were compared by means of ANOVA. While the ANOVA showed that adolescents with mothers who were not employed ($N = 8$) had slightly lower disposable incomes than adolescents with mothers who were working full- or part-time, the effect of 'working status' for 'income' was not significant ($F_{2,89} = .238$, n.s.). While the ANOVA showed that adolescents with mothers who were not employed scored slightly higher on the 'general tendency to save' measure than

adolescents with mothers currently working full or part-time, the effect of 'working status' for 'general tendency to save' was not significant ($F_{2,91} = .324$, n.s.). It should again be noted that cell sizes were unequal (only eight mothers were not employed).

Because approximately 85 percent of the fathers were in full-time paid or full-time self employment, and only about six percent in part-time paid or part-time self employment, it was decided to compare those with full-time work to all others. T-tests were carried out to examine whether fathers' working status was related to the disposable income of adolescents and their 'general tendency to save'. No significant differences were found for adolescents' 'income' ($t = -.509$, $df = 89$, n.s.) and no significant differences were found for their 'general tendency to save' ($t = -.130$, $df = 91$, n.s.).

Adolescents' general tendency to save: psychological variables

Adolescents' general tendency to save' was positively correlated with adolescents' 'future time perspective' ($r = .338$, $p < .01$) and with adolescents' 'conscientiousness' ($r = .399$, $p < .01$). In addition, adolescents' 'conscientiousness' and 'future time perspective' were positively correlated ($r = .616$, $p < .01$).

When investigating the associations between the 'general tendency to save' measure of adolescents and the 'future time perspective' and 'conscientiousness' measures of the parents, no significant correlations were found.

Adolescents' general tendency to save: parent variables

When correlational analyses were used to investigate the relationships between parents' attitude variables, their practices to encourage adolescent saving behaviour, parenting style as perceived by the adolescents and the adolescents' general tendency to save, no significant relationships were found for any of the measures obtained from the fathers. Of the measures obtained from mothers, the attitude variable 'educate' (parents as guides) correlated significantly with adolescents' 'general tendency to save' ($r = .278$, $p < .01$). Of the parenting styles, only the 'authoritative'

style correlated significantly with adolescents' 'general tendency to save' ($r = .302, p < .01$), not the over-involved style ($r = .009, n.s.$). Furthermore, adolescents' 'general tendency to save' was not correlated with the 'general tendency to save' of either the mother ($r = .025, n.s.$) or the father ($r = .086, n.s.$).

Getting larger sums of money: perceived parenting style, parents' attitudes and practices

When correlational analyses were used to investigate potential relationships between the parent measures 'attitudes', 'practices', 'conscientiousness', and 'future time perspective', and the two ways of getting larger sums of money 'saving by adjusting expenditure' and 'negotiate, borrow', only one relationship was significant. This was the positive relationship between mothers' practice 'interfere' and the saving alternative 'negotiate, borrow' ($r = .352, p < .01$).

Saving-related measures: perceived parenting style and parents' practices

A number of significant relationships were found between parent variables and the three saving-related measures 'I usually give into temptation', 'saving self-efficacy', and 'need for money'.

There was a positive and significant relationship between the 'neglectful-unengaged' parenting style and 'I usually give into temptation' ($r = .214, p < .05$). In addition, a significant and negative relationship was found between the 'neglectful-unengaged' parenting style and the adolescent 'saving self-efficacy' measure ($r = -.207, p < .05$). Furthermore, in line with the findings of Study 3, a significant positive relationship was found between the 'authoritative' parenting style and the adolescent 'saving self-efficacy' measure ($r = .280, p < .01$).

A significant and positive relationship was found between the parenting practice 'interfere' (as reported by mothers) and the adolescents' perceived 'need for money' ($r = .372, p < .01$). A significant and negative relationship was found between the parenting practice 'interfere' (as reported by mothers) and the adolescent 'saving self-efficacy' measure ($r = -.207, p < .05$).

These correlations indicate that there are more relationships between adolescents' saving behaviour and measures obtained from their mothers rather than their fathers. This highlights the significant role of mothers in the economic socialization process concerning the development of adolescent saving.

Adolescent saving in the social context of the family

In order to address the question how the parent variables contribute to a better understanding of saving behaviour during adolescence, in a next step, a variety of different regression analyses were carried out to examine the relationships between the parent variables and selected adolescent variables first.

Based on the results of the correlations reported above, five variables were selected to investigate how well we can predict an adolescent's general tendency to save, as well as the adolescents' attitudes towards saving from measures obtained from the parents. Because most of the significant relationships between adolescent and parent variables were with measures from the mothers, four of the five selected variables for the regression analyses are measures obtained from mothers. The variables entered into the following four hierarchical regressions were 'conscientiousness' (mothers), 'future time perspective' (mothers), the practice 'interfere' (mothers), the attitude 'educate' (mothers), as well as the attitude measure 'protect' (fathers). In addition, a dummy variable for the parenting style 'authoritative' as perceived by the adolescent was included. Table 7.7 shows the result of the regressions.

Table 7.7 *Overview of significant predictors for the dependent variables*

| | general tendency to save | | | struggle | | | dependency on parents | | | saving is a good thing | | |
|----------------------------------|--------------------------|-------|------|--------------|---------------|-------------|-----------------------|---------------|-------------|------------------------|--------------|-------------|
| | Beta | t | Sig. | Beta | t | Sig. | Beta | t | Sig. | Beta | t | Sig. |
| 1 (Constant) | | 2.597 | .011 | | 5.301 | .000 | | 4.384 | .000 | | 4.958 | .000 |
| m conscientiousness | .127 | 1.031 | .306 | .118 | .955 | .342 | .263 | 2.142 | .035 | -.011 | -.093 | .926 |
| m future time perspective | .130 | 1.058 | .293 | -.283 | -2.281 | .025 | -.310 | -2.530 | .013 | .273 | 2.216 | .029 |
| <i>R</i> ² <i>adj</i> | | .03 | | | .04 | | | .06 | | | .05 | |
| 2 (Constant) | | .416 | .679 | | 5.807 | .000 | | 2.595 | .011 | | 3.352 | .001 |

| | | | | | | | | | | | | |
|---|-------------|--------------|-------------|--------------|---------------|-------------|--------------|---------------|-------------|-------------|--------------|-------------|
| m conscientiousness | .085 | .695 | .489 | .161 | 1.322 | .190 | .259 | 2.172 | .033 | -.038 | -.310 | .757 |
| m future time perspective | .084 | .683 | .497 | -.223 | -1.802 | .075 | -.286 | -2.365 | .020 | .215 | 1.739 | .086 |
| m attitude 'educate' | .232 | 2.159 | .034 | -.260 | -2.405 | .018 | -.048 | -0.456 | .650 | .211 | 1.951 | .054 |
| f attitude 'protect' | .112 | 1.104 | .273 | -.078 | -.768 | .445 | .297 | 2.996 | .004 | -.155 | -1.534 | .129 |
| <i>R</i> ² <i>adj</i> | | .07 | | | .09 | | | .12 | | | .08 | |
| 3 (Constant) | | .860 | .392 | | 5.136 | .000 | | 2.168 | .033 | | 3.701 | .000 |
| m conscientiousness | .083 | .689 | .493 | .164 | 1.351 | .180 | .261 | 2.188 | .031 | -.041 | -.338 | .736 |
| m future time perspective | .098 | .808 | .422 | -.240 | -1.940 | .056 | -.298 | -2.451 | .016 | .234 | 1.903 | .060 |
| m attitude 'educate' | .203 | 1.880 | .064 | -.231 | -2.103 | .038 | -.027 | -0.255 | .800 | .177 | 1.622 | .108 |
| f attitude 'protect' | .122 | 1.214 | .228 | -.090 | -.888 | .377 | .289 | 2.898 | .005 | -.142 | -1.404 | .164 |
| m interfere | -.156 | -1.529 | .130 | .140 | 1.369 | .175 | .099 | 0.984 | .328 | -.161 | -1.574 | .119 |
| <i>R</i> ² <i>adj</i> | | .09 | | | .10 | | | .12 | | | .10 | |
| 4 (Constant) | | .670 | .504 | | 5.928 | .000 | | 2.402 | .018 | | 3.671 | .000 |
| m conscientiousness | .113 | .968 | .336 | .122 | 1.100 | .275 | .236 | 2.028 | .046 | -.005 | -.040 | .968 |
| m future time perspective | .089 | .760 | .449 | -.233 | -2.061 | .042 | -.294 | -2.483 | .015 | .228 | 1.981 | .051 |
| m attitude 'educate' | .189 | 1.812 | .073 | -.204 | -2.027 | .046 | -.011 | -.107 | .915 | .154 | 1.498 | .138 |
| f attitude 'protect' | .099 | 1.022 | .310 | -.062 | -.664 | .509 | .306 | 3.144 | .002 | -.166 | -1.759 | .082 |
| m interfere | -.125 | -1.270 | .208 | .100 | 1.059 | .293 | .075 | .762 | .448 | -.125 | -1.305 | .196 |
| authoritative versus non-authoritative parenting | .270 | 2.757 | .007 | -.393 | -4.234 | .000 | -.234 | -2.398 | .019 | .344 | 3.627 | .000 |
| <i>R</i> ² <i>adj</i> | | .15 | | | .25 | | | .17 | | | .22 | |

In all these regressions, the last model was significant at the .01 level and explained the highest percentage of the variance. In all these models, the parenting style variable 'authoritative' was a significant predictor and explained at least an additional five percent of the variance. The highest contribution in explained variance of this variable was for the prediction of the attitude subscale 'struggle' (15 percent).

These regressions shed light on the relationships of the selected variables and their importance for understanding the contribution of parent variables in predicting adolescents' general tendency to save, as well as in predicting their attitudes towards saving.

In a next step, two regressions (one forward and one backward²³ regression) were carried out to find the best model for 'general tendency to save' with variables obtained from the students alone. This was done to identify the minimum number of predictors that are contributing to explaining the maximum variance in 'general

²³ To avoid any possible suppressor effects at this stage, both forward and backward regressions were used.

tendency to save' during adolescence. With 94 cases in total, it was appropriate to use a final regression analysis using six (at most) independent variables from both parents and adolescents together.

To select relevant variables from the adolescents for use as independent variables in the regression to predict an adolescents' 'general tendency to save', correlational analyses were carried out. In Study 2, a number of significant predictors of 'general tendency to save' had been identified. These variables were now selected for the correlational analyses: 'income' (standardized), 'conscientiousness', 'future time perspective', 'need for money' (in leisure time), and the attitude subscales 'struggle' and 'saving is a good thing'. In addition, the new variable 'saving self-efficacy' was used. Apart from the income variable that correlated only significantly at the .05 level, all variables were significantly correlated at the .01 level with the measure 'general tendency to save'. With the attempt to reduce the number of variables that will be entered in the regression, a decision was made between the variable 'income' and 'need for money' ('income' was used because it is a socio-economic variable and 'need for money' is a psychological variable) and in addition, only the attitude subscale 'struggle' was selected (and not the attitude 'saving is a good thing'), because the variable 'struggle' correlated higher with the variable 'general tendency to save'. Thus, using 'general tendency to save' as the dependent variable, and 'income', 'future time perspective', 'conscientiousness', 'saving self-efficacy', and the attitude subscale 'struggle' as independent variables, the best model that emerged using backward and forward regressions had an R^2 adjusted of .53 ($F_{3,86} = 32.939$, $p < .001$). This model had three significant predictors, the attitude subscale 'struggle', the psychological variable 'conscientiousness' and the variable 'saving self-efficacy' with standardized beta coefficients of -.460 and .170 and .237 respectively.

Significant predictors of an adolescents' attitude subscale 'struggle' using parent variables were mother's attitude 'educate' and the perceived parenting style 'authoritativeness'. Note, that the perceived parenting style measure is a measure obtained from the adolescents but with regard to parenting behaviour (as perceived by the adolescent). Therefore, conceptually, this measure is considered to be a parent variable. In Chapter 5, relationships between the adolescents' conscientiousness, as well as the adolescents' 'saving self-efficacy' with the authoritative parenting style

were established. For the final regression, therefore, the parenting style ‘authoritative’, as well as mother’s attitude ‘educate’ were selected as variables from the parents.

In order to test for the relative importance of predictors for an adolescents’ general tendency to save obtained from the adolescents and the parent (i.e. mother) a hierarchical regression was carried out. Table 7.8 shows how each predictor variable is associated with the adolescents’ ‘general tendency to save’.

The first model demonstrates that the three variables ‘conscientiousness’, ‘saving self-efficacy’, and the attitude subscale ‘struggle’ explain 53 percent of the variance and that all three variables are significant predictors. The second model shows that whilst parent variables explained approximately 15 percent of the total variance when the adolescent variables were left out (see Table 7.7), they don’t improve the model (both models are significant, but the second model does not explain more percent of the variance). Furthermore, both parent measures are insignificant.

Table 7.8 *Overview of significant predictors for adolescents’ general tendency to save*

| Model | Independent variable | Dependent variable | | |
|--------------------------|---------------------------------|----------------------------|--------|-------|
| | | 'general tendency to save' | | |
| | | Beta | t | Sign. |
| 1 | (Constant) | | 5.273 | .000 |
| R ² adj = .53 | Adolescent variables | | | |
| | Conscientiousness | .175 | 2.214 | .029 |
| | Saving self-efficacy | .242 | 2.190 | .031 |
| | Attitude subscale ‘struggle’ | -.457 | -4.283 | .000 |
| 2 | (Constant) | | 2.657 | .009 |
| R ² adj = .53 | Adolescent variables | | | |
| | Conscientiousness | .170 | 2.111 | .038 |
| | Saving self-efficacy | .240 | 2.170 | .033 |
| | Attitude subscale ‘struggle’ | -.432 | -3.717 | .000 |
| | Parent variables | | | |
| | Attitude ‘educate’ (mother) | .127 | 1.673 | .098 |
| | Parenting style ‘authoritative’ | -.021 | -.251 | .803 |

To obtain a clearer view of the relationships between the selected variables, a path model was constructed and put to the test. This model is based on the results found in

Study 2 and Study 3, as well as on the results of the regression analyses described above. From Study 3 we have learned that the ‘authoritative’ and ‘over-involved’ parenting styles promote skills that are related to being successful at saving. The over-involved parenting style however, was not correlated with adolescents’ ‘general tendency to save’ in this study, while the authoritative parenting style was a significant predictor of ‘general tendency to save’ when entered into a regression with parent variables alone. Furthermore, from the results of the regressions described above, it was predicted that whilst ‘conscientiousness’, ‘saving self-efficacy’, and ‘struggle’ are significant predictors of ‘general tendency to save’, the parenting variable ‘authoritative’ would influence all three predictor variables and parents’ attitude ‘educate’ (only mothers considered) would influence the adolescents’ attitude ‘struggle’ (as shown below). Furthermore, links are expected between ‘saving self-efficacy’, ‘conscientiousness’, and ‘struggle’ as indicated with the double-arrows.

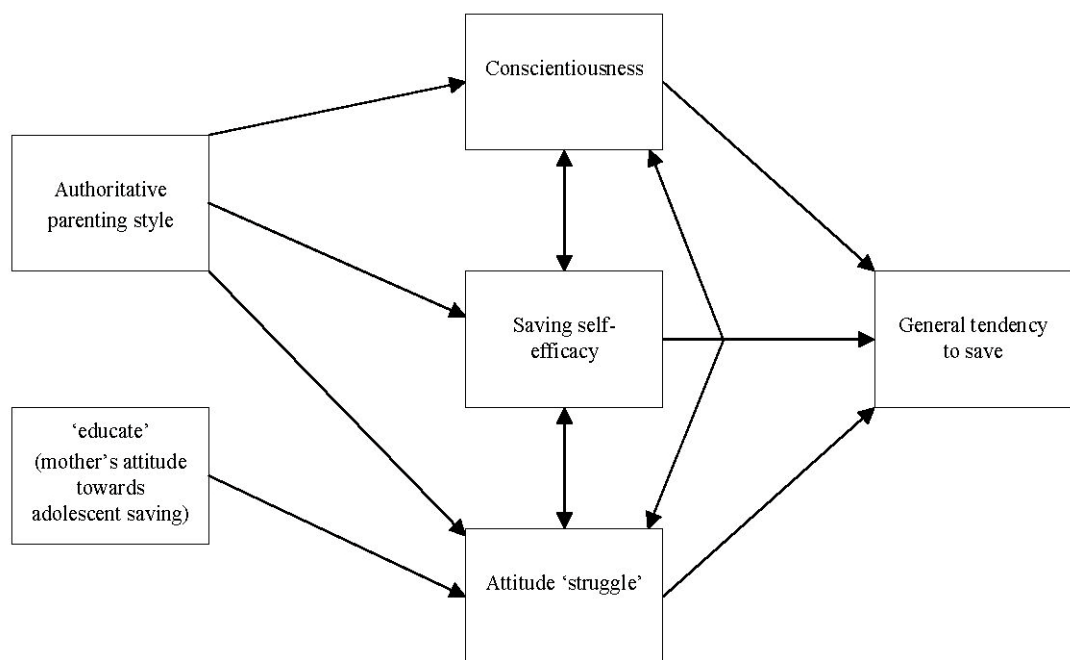


Figure 7.3 *Proposed path model explaining ‘general tendency to save’ in adolescents*

This model has been tested using Mplus (Muthén & Muthén, 1998-2007). The model as initially specified was significant but the RMSEA was above .10 (this exceeds the cut-off value required for ‘mediocre fit’ as described by MacCallum, Browne, and

Sugawara, 1996). The model was therefore refined. The variable ‘income’ (standardized) had not been a significant predictor of an adolescents’ ‘general tendency to save’ when the regressions were run. However, it is correlated with someone’s ‘general tendency to save’. ‘Income’ had not been included based on the results of the regressions. In order to improve the model (no modification indices were given), it was now included as a moderator variable for completeness. This was possible, because the number of cases allowed for an extra variable to be included. The selection of ‘income’ as moderator variable resulted in a better model (the influence was significant, one-tailed). Still, no modification indices were given and the model was further refined by including an influence of the variable ‘educate’ on the variable ‘saving self-efficacy’. Mothers’ attitude ‘educate’ and adolescents’ ‘saving self-efficacy’ are correlated. The influence could have been included in the proposed model initially. It is sensible to assume that mother’s attitude ‘educate’ will improve the adolescents’ confidence in his or her ability to successfully apply certain saving strategies.

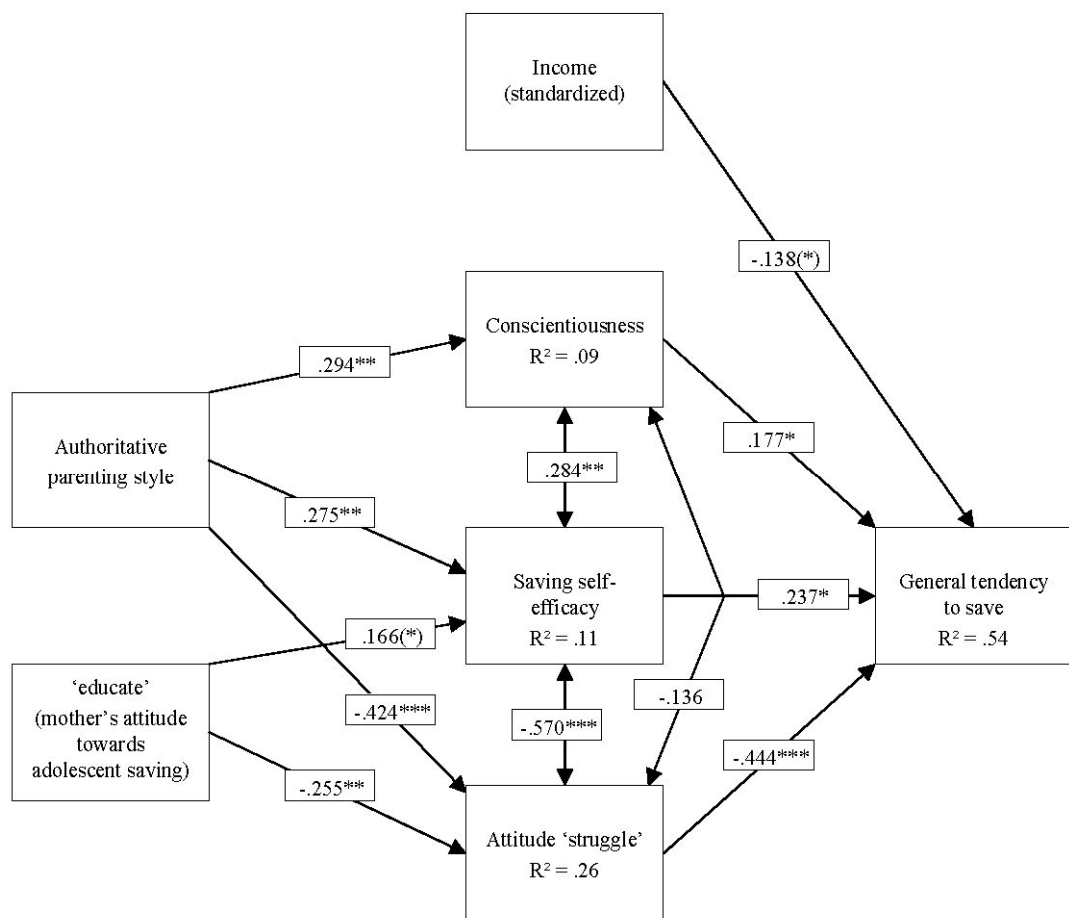


Figure 7.4 Path model explaining ‘general tendency to save’ in adolescents

Testing this model, it became clear that the influence was significant (one-tailed). The result of these two small modifications was a significant model that demonstrated a moderate to good fit ($\chi^2(6) = 8.892, p = .179, CFI = .984, TLI = .951, RMSEA = .074, SRMR = .060$). The RMSEA measure is below the 0.08 cut-off value required for a 'moderate fit' (Hu & Bentler, 1999, p. 6), in other words, this is a good fit to the data. In addition, Hu and Bentler (p.24) proposed combinational rules and when $N < 250$, a model should be rejected with $CFI < .95$ and $SRMR > .09$. The CFI is above .95 and the SRMR is below .09, which means that also when applying this rule, the model as presented in Figure 6.2 closely corresponds to the pattern of covariances in the data.

From this model it becomes clear that there is an indirect effect of the authoritative parenting style on adolescents' 'general tendency to save'. This effect is mediated through the variables 'conscientiousness', 'saving self-efficacy' and the attitude subscale 'struggle'. Perceiving one's parents as 'authoritative' reduces the difficulties the adolescent experiences with saving, whilst it enhances the adolescents' 'saving self-efficacy'. Furthermore, the influence of an authoritative home on the adolescents' level of 'conscientiousness' is also significant. This part of the model supports/ can be considered as a replication of the findings of Study 3. Furthermore, the model shows that mother's attitude 'educate' has an effect on 'general tendency to save' via its influence on the adolescents' 'saving self-efficacy' and the adolescents' attitude subscale 'struggle'. Perceived difficulties with saving ('struggle') are reduced and 'saving self-efficacy' is enhanced through an 'educator' mother (a mother with a mindset or attitude 'educate' when it comes to the saving behaviour of her adolescent child).

This model gives a clear view of the relationships between the selected variables. The advantage of a path model over regression analyses is that through a path model, it is possible to show indirect effects. The path model tested in this study demonstrates the indirect effect of an authoritative parenting style and mother's attitude 'educate' on the adolescents' 'general tendency to save'.

7.3.4 Discussion

This final study had two main aims. First, associations of several variables from parents with the saving attitudes and the saving behaviour of their adolescent child were inspected and explored. This investigation revealed a number of important insights and significant relationships that further our understanding of the development of saving behaviour when young. The second aim of Study 4 was to test whether the model mentioned in Chapter 2 (paragraph 2.5) and refined in line with the results of the preceding studies and the results of the empirical part of the current study is consistent with the data. This investigation has revealed that parenting behaviour can provide children with the capacities to be more successful with saving (or more inclined to) save in general.

The measures developed in Pilot Study 4 were reliable and there seemed to be only minor differences between mothers and fathers or across the four types of perceived parenting style. However, when differences were found between mothers and fathers, the mothers had the higher scores. This is in line with the finding that the mothers seemed to be more frequently involved in pocket money matters than fathers, something that has also been reported by Warton and Goodnow (1995).

Attitudes and practices

The finding that the attitudes of parents towards their adolescent child's saving seemed to mirror the attitudes of their adolescent child clearly indicates that there are interdependencies between parents and children that should be taken into account when studying the development of economic behaviour in general and saving behaviour in particular. While it has to be acknowledged that the relationships found in this study are just that and one has to be cautious in drawing conclusions about causality, it clearly shows that there is considerable consensus between the reports of the adolescents and the reports of the parents. An adolescent with for example an attitude towards saving that is best described as 'dependency on parents' had parents who reported an attitude towards their adolescent child's saving that is best characterised by 'protection'. This relationship was significant for both mothers and fathers. With regard to the attitude 'educate', only mothers' attitude seemed to

correspond with adolescents' attitude towards 'parents as guides', that is, adolescents who are in favour of guidance and advice received from their parents with regard to money management matters seemed to have mothers who thought of themselves as somebody who guides and educates. While this is perfectly reasonable given that mothers were found to be more in charge of the pocket money management, it is not in line with the results of Hira (1997), who had only found a small difference between mothers and fathers in frequency, when college students were asked about who their most important source of influence on money beliefs and attitudes was.

When the practices parents use to encourage saving in their adolescent child were compared across perceived parenting style, it was found that 'neglectful-unengaged' parents control their adolescent child's spending behaviour less than all other parents. This relationship was expected, since 'neglectful-unengaged' parents score low on all parenting style dimensions, of which one is 'strictness/ supervision'. The finding reveals that certain general characteristics of parents can also be located when looking at rather specific practices parents for example use with regard to the management of their adolescent child's pocket money or allowance. The finding that parents who are perceived as 'authoritative' do use the practice 'argue-talk' less frequently than all other parents demonstrates that authoritative parents indeed use well established rules (Steinberg, 1990) and that this can result in less need for negotiation. While pocket money seems to be an area of everyday conflicts between family members or parents and their teenage child (Rayalu, 1991; Rodrigo, García, Máiquez, & Triana, 2005), it might be possible that adolescents who perceive their parents as authoritative, experience less money management related conflict at home than adolescents who perceive their parents as non-authoritative.

Parents' attitudes and practices were also linked with adolescents' saving behaviour and measures that are related to the adolescents' 'general tendency to save'. Again, the attitude 'educate' (as reported by the mothers), seemed to play an important role for adolescents' general tendency to save and their perceived 'saving self-efficacy'. This suggests that mothers who think of themselves as educators do somehow promote and facilitate the saving behaviour of their adolescent child. On the other hand, interfering with saving (lending money to the child and turning a blind eye towards money that had been given in advance and should be paid back) seemed to

undermine adolescents' confidence in their ability to be successful at saving (low scores on 'saving self-efficacy'). The lower scores on the subscale 'saving is a good thing' might be the result of this lack of confidence. In line with this is the finding that adolescents' whose parents regularly interfere with saving frequently opt for 'negotiate, borrow' when trying to get larger sums of money.

Saving behaviour

Adolescents' income and general tendency to save: socio-economic environment

While research that investigated the impact of the socio-economic environment on the economic socialization of children and adolescents as described in Chapter 2 (paragraph 2.3.1) has resulted in inconclusive results, the results of the current study showed that the disposable income of adolescents and their general tendency to save was not related to any of the four variables included. It should be noted however, that the sample was rather homogeneous with regard to family structure and household income. Nevertheless, the results clearly showed that in the current data, there was no relationship. The finding that family income was not related to adolescent saving is in line with Pritchard, Myers, and Cassidy's (1989) findings. However, contrary to the results of Study 4, in their study, parents' level of education was related to adolescent saving. A reason for why these background variables were not related to adolescents' income and saving could be the average age of the students who took part in Study 4, if what Stacey (1982) suggested is true. The influence of socio-economic background variables may, according to Stacey, be more pronounced during adolescence than during childhood. Since most of the students who took part in Study 4 were below the age of 14, it could be that they were not old enough for any potential relationships to be picked up. However, as has been demonstrated with the current study, it seems that overall, other context variables are more influential or important for the development of a 'general tendency to save' during adolescence.

Adolescents' general tendency to save: psychological variables

Parents' 'future time perspective' measures were not related to their child's 'future time perspective'. This result does not support the finding of Webley and Nyhus

(2006) who found significant relationships between these measures with the same instrument. It should be noted however, that the adolescents in their sample were 16 and older. In the study by Webley and Nyhus father's 'conscientiousness' was correlated with child's 'conscientiousness'. Again, in Study 4, the conscientiousness of the adolescent was unrelated to mother's or father's conscientiousness. However, the sample used in Study 4 was much smaller than the sample Webley and Nyhus used in their study. In addition, although the effects they found were significant, they were not very strong. This means that the results of Study 4 and the study by Webley and Nyhus cannot easily be compared. Nevertheless, this does not mean that with a bigger sample and middle adolescents, as opposed to early adolescents, comparable relationships could have been found. This is however speculative.

Saving-related measures: perceived parenting style and parents' practices

The finding that the perceived parenting style variable 'authoritative' was significantly and positively associated with the 'saving self-efficacy' beliefs of the adolescents is in line with the results of Study 3. A new finding of Study 4 is that the parenting practice 'interfere' (as reported by mothers) was negatively associated with the 'saving self-efficacy' beliefs of the adolescents. This finding however is not surprising. When parents keep interfering with the saving attempts of their adolescent child, the adolescent may not believe that he or she is able to successfully save up for something without assistance.

Adolescent saving in the social context of the family

Throughout the analyses of Study 4, a positive impact of the authoritative parenting style could be observed (as demonstrated in Study 3). The regressions were used to shed light on the relationships between parent variables and adolescent saving and attitudes towards saving. With the path model the predicted indirect effect of this parenting style on adolescents' 'general tendency to save' could be confirmed.

Considering the results of the regressions that showed that when only variables from parents were used, the percentage of the explained variance ranged from 15 to 22

percent, it is evident that there must be other factors at play that have not been investigated and considered in the current study. Although the percentage of explained variance was not much higher than the percentage explained in the study by Furnham (2001), in the current study, the predictors were significant.

The main finding of Study 4 is that the impact of perceived parenting style on a young person's 'general tendency to save' is indirect and that mother's who see themselves as educators tend to also (somehow) promote good saving practice in their adolescent child.

What becomes clear from the items that form the attitude subscale 'educate' is that parents (i.e. mothers) seem to influence the saving behaviour of their adolescent child through modelling ('By saving myself, I set an example for my child.'). This is in line with the social learning theory (Bandura, 1977). Therefore, the positive effects of the role of a mother as money management example (or model) for the child are likely to depend on the quality of the mother's money management. A measure Furnham (2001) had used to tap into this was the 'money-smarts' test derived from Bodnar (1997).

Based on Darling and Steinberg's (1993) integrative model of parenting style as context in which socialization occurs, it was expected that students from authoritative homes with parents who favour saving and encourage saving behaviour, are more likely to choose to save up for something they put their heart on, than adolescents from either non-authoritative homes with parents who favour and encourage saving, or authoritative homes with parents who do not favour and encourage saving. However, whether the effect of 'educate' is bigger for children who are raised in authoritative homes could not be tested with the data collected in Study 4. For such an investigation, a bigger sample is needed that can be divided in a number of large-enough subgroups.

7.4 Summary

The results presented here support the view that there is more to learn from parents' attitudes, their use of money management specific practices, and their general parenting styles (as perceived by the adolescent) and that the relationships between parents' dispositions and their child's disposition are probably less evident at the age of 13. The findings support the importance of perceived parenting style for the development of saving as an economic behaviour.

What was striking though about the findings was that parents' use of practices as measured through the five subscales 'argue-talk', 'support', 'encourage', 'interfere', and 'control' did not seem to matter. This is counter-intuitive: one would think that parents' behaviour and strategies to encourage saving would have an influence. The items were piloted and the scales were reliable, but the few significant correlations were low in magnitude. Furthermore, when looking at the raw means and standard deviation of these scales, more significant differences in scores between mothers and fathers were found for the practices. From this, one would think that it is exactly there, where something is going on that will have an impact. Notwithstanding, a meaningful finding with regard to the use of money management practices by mothers certainly was the impedimental impact of 'interfere' (when looked at on a univariate level).

This final study has demonstrated that parents' attitudes and their general parenting style do play an important role when one is to look at the development of adolescent saving from a socialization perspective. The following final chapter of this thesis will highlight and discuss the most important findings of the economic psychology of adolescent saving in light of the adolescent's general psychological development.

Chapter 8 - Adolescent saving: fitting together pieces of the puzzle

8.1 Introduction

This chapter reviews the findings of the research presented in this thesis. It also describes the limitations of the research as well as draws conclusions and highlights practical and theoretical implications. Finally, some possible directions for further research are proposed.

This thesis provides an account of developmental changes in saving behaviour during adolescence that are embedded in the context of the family as a social system. This is done using an economic psychological approach to the study of saving in adolescence, taking into account aspects of general adolescent development, as well as the influence of the parents as the main socialization agents. While the ‘early years’ have repeatedly been referred to as the ‘important years’ with regard to the development of money attitudes, saving attitudes, money management, and saving behaviour, few attempts have been made to investigate what is going on during the second decade of life with regard to saving behaviour. The research presented in this thesis is motivated by the frequent references made to habit formation and saving behaviour being learned early in life. Building on the work that has been presented by Sonuga-Barke and Webley (1993) and Furnham (2001), as well as on numerous studies conducted on the saving behaviour of adults, this thesis attempts to deepen our understanding of the development of saving behaviour between the ages 11 and 18 and to tie together the work on children’s saving and adult’s saving.

Apart from being of theoretical and academic interest, this thesis provides information that may be of interest to parents, financial institutions, and those responsible for public policy. The fact that an increasing number of young people and teenagers in Western countries are in debt already by the age of 15 is worrying for a number of reasons. According to Adams and Moore (2007), high levels of debt

are stressful and may therefore be associated with mental health issues or chronic stress. Also Tatzel (2002) reports a relationship between being overly tight with money and lowered well-being. Likewise, in their study on personality factors, money attitudes, financial knowledge, and credit-card debt in college students, Norvilitis et al. (2006) found that greater debt was associated with greater stress. The trend of being in debt around the age of 15 is credited to the growing use of mobile phones (Moneyminded, 2007). 'With the nation's debt at record levels there has never been a greater need to teach young people how to manage money' (pfeg, 2007). There are a number of self-help books parents can turn to in order to find help and advice as to how to teach children the use of money, but to date, there have been no empirical tests of the effectiveness of this advice.

The use of a context-based model of adolescent development is a tacit recognition that the study of the development of saving behaviour should take into account the interactive nature of the relationship between the adolescent and the environment. A first step in this direction is made by investigating adolescents' saving attitudes, saving strategies, and their general tendency to save, in relation to perceived parenting style and parents' attitudes and practices with regard to the saving behaviour of their adolescent child.

8.2 Findings

The review of the literature showed that our knowledge of saving behaviour is mainly based on research with adults and experimental studies with children. Adolescents' saving behaviour has received very little attention.

Having identified this gap in our empirical knowledge, the first study (reported in Chapter 4) investigated the importance of saving during adolescence relative to other ways of obtaining larger sums of money. It could have been possible, that the neglect of the pre-adult years is justified, had the first study demonstrated that in general saving was not particularly important as a means of getting larger sums of money. After all, adolescents live at home and necessities are provided for by their parents. In addition, the review of the literature on children's saving suggested that

approaching parents might be a more effective and quicker way of increasing one's income. The results of the first study provided evidence that until the age of 15, saving is an option for getting larger sums of money that is just as important as approaching one's parents. For adolescents older than 15, saving becomes more important. In fact, in relation to the three alternatives that were taken into account ('negotiate, borrow, dissave', 'working', and 'selling'), at this age, saving was the preferred option. This finding is in line with a general increase in independence and behavioural autonomy, which characterises psychological development during adolescence. The study investigated the saving choices of adolescents, while considering economic alternatives typical for the economic world of adolescents. In doing so, this first study built the foundations for the following studies of this thesis.

The second study (reported in Chapter 5) was used to examine whether some of the relationships that were found between measures relevant for saving in adults could also be identified in adolescents. This proved to be the case. However, when attitudinal variables were entered in the model, the well-established variable 'conscientiousness' became insignificant and 'future time perspective' became less significant. This demonstrates that during adolescence, saving behaviour is associated with difficulties that seem to dominate and determine whether someone generally tends to save rather than spend. It also highlights that the saving attitude 'struggle' is related to self-control and the adolescents' ability to delay gratification in an economic context. The finding also suggests that of the core dimensions of the conscientiousness construct, self-control (and *not* order or industriousness) is the most important for understanding saving in adolescents. Furthermore, in keeping with general adolescent development, the results of Study 2 highlight that adolescents do value independence. In line with this, the study demonstrated a decrease in dependency on one's parents with regard to the economic socialization domain, using the example of saving attitudes. This advance can be considered healthy in terms of the general psychology of adolescent development. In addition, Study 2 is the first non-experimental study revealing that with an increase in age, adolescents' use of cognitive saving strategies becomes more frequent. This finding exemplifies that certain aspects of economic socialization in adolescence are associated with adolescent cognitive development.

The third study (reported in Chapter 6) is the first empirical study to investigate the relationship between adolescents' saving behaviour and perceived parenting style. Developmental research reviewed in Chapter 2 and Chapter 6 indicated that the investigation of the development of saving behaviour as being embedded in the context of the family as a social system (the 'microsystem' of Bronfenbrenner, 1993), would help us better understand the processes that are involved in the acquisition of saving skills and habits. Indeed, the third study demonstrated that a consideration of perceived parenting style as a context variable is beneficial to research on saving during adolescence, because the study pointed towards a number of important relationships between perceived parenting style and aspects of adolescent saving. Study 3 provided the first insights into the processes through which saving skills and habits might be learned and established.

The final study (reported in Chapter 7) gives a fine-grained account of the links between parents' attitudes and behaviours and their adolescent child's attitudes and behaviours in a saving context. The investigation of parents' use of practices to promote saving behaviour in their child and the attitudes they hold towards their child's saving (attempts) revealed that the impact parents have on their adolescent child's saving behaviour is indirect through boosting their child's saving self-efficacy beliefs on the one hand and through reducing the level of experienced difficulties with saving on the other. As shown in the model, this is accomplished through a) an attitude of mothers towards their adolescent child's saving behaviour that indicates that they think of themselves as 'educators', and b) a general parenting style that is considered authoritative by the adolescent. In other words, the results of the study suggest that parents' use of practices aimed at encouraging saving behaviour in their adolescent child -as found in self-help books aimed at parents (Bodnar, 1996, 1997; Estess & Barocas, 1994)- do *not* have an impact on the saving behaviour of their adolescent child, but that a mothers' attitude 'educate' and parents' general parenting style are rather important.

8.3 General Discussion

From the studies reported in this thesis, it is clear that investigating adolescent saving in the family context provides a number of insights into the processes that could be involved in the development of saving skills and saving habits.

8.3.1 Optimizing expenditure in light of increasing independence

The life-cycle hypothesis predicts that people optimize expenditure over their life span (Modigliani & Brumsberg, 1954). Adolescents can optimize their expenditure through trying to get more money out of their parents. Study 1 showed that this strategy is widely used. It is therefore possible, that provided they are successful in approaching their parents, adolescents who chose to ‘borrow, negotiate, dissave’ have found an effective way to optimize their expenditure without having to save (or earn) money.

Although saving becomes more attractive as an option above the age of 15, the results of the study indicated that adolescents who rely on their parents and try to get more out of them are less patient than those who try to save.

The finding that saving became more popular after the age of 15 highlights two things. First, it could be linked to the adolescents’ general increase in behavioural autonomy and independence typical for adolescent psychological development (Douvan & Adelson, 1966; Collins & Steinberg, 2008), together with an attitude that it might also be more appropriate and mature to solve one’s income constraint problems without the help of one’s parents. Second, and at the same time, saving could become easier because of positive past experiences, higher saving self-efficacy beliefs, as well as significantly higher incomes as a result of part-time working. Note that a higher income will reduce the time needed to save up a certain amount. Therefore, a particular saving goal might be less distant for someone with a higher income.

The finding that adolescents who rely on their parents and try to get more money out of them were less patient than those who reported trying to save, highlights the importance of self-control for being successful at saving and suggests that

adolescents who have difficulties with self-control or the delay of gratification seem to be successful at relying on their parents. That is, the first study already showed that the development of saving behaviour cannot be investigated in isolation but should be studied by taking into account the social context of the family.

Chapter 2 identified that adolescents are dependent on their parents not only in economic terms but also psychologically. Taking perceived parenting style into account as a context for economic socialization and for saving behaviour in particular, has revealed that adolescents from over-involved, authoritative, and neglectful-unengaged homes were (with regard to financial matters) psychologically more dependent on their parents, than adolescents from authoritative homes. This was reflected in lower scores on the attitude subscale 'dependency on parents' of the latter group.

The notion that adolescents are financially dependent on their parents is widely accepted (at least until adolescent children finish school). When a decision is made to go to university for example, the financial dependency on one's parents can carry through to the age of 25 (or more). In describing different paths to economic independence, Webley, Burgoyne, Lea, and Young (2001) distinguished between young households and more mature households and stressed that young households are very likely to receive financial support from their parents. Also, when a first house is bought, young households can be supported by their families (Pickvance & Pickvance, 1995). This shows that not only adolescents but also adults can be supported by their parents. A study that took into account young-age dependency and old-age dependency was the research on the determinants of national saving presented by Hussain and Brookins (2001). Notwithstanding this work, the issue of dependency on parents is something that has probably been underestimated in saving research on adults.

8.3.2 Saving in adolescence and adolescent development

Why do adolescents save? (motives)

As was expected, saving for a rainy day is not one of the three top priorities for adolescents. The finding that for adolescents, the precautionary saving motive was of medium importance could indicate that adolescents do indeed think of their parents as a buffer. In Chapter 2, this possibility has been described as specific to the economic world of adolescents. It should be noted however, that financial support by parents is not only an option for adolescents, but also for emerging adults, as well as young adults (Schneider, 2000; Jones, O'Sullivan, & Rouse, 2006). On the other hand, this finding could be an indication of the adolescents' general insight that someone should save in order to be on the safe side. It could also be that adolescents think of saving as something one should do, because they feel that for certain expenditures, they cannot or should not rely on their parents. The finding that children as young as six think of saving as a good thing one should do, has been reported by Sonuga-Barke and Webley (1993). This suggests that the importance of the precautionary saving motive may be learned before this motive actually becomes meaningful.

While for adults, the abstract saving goal 'autonomy' was found to be linked to security and precaution and meant that people wanted to be independent in general (Canova, Manganelli Rattazzi, & Webley, 2005), it is likely that the independence striven for by adolescents stands for an independence from one's parents. This would be in line with developmental changes typical for the period of adolescence (as reviewed in Chapter 2, paragraph 2.3.3).

Furthermore, the finding that adolescents tend to save for goals, to be independent, and to manage cash might help explain why the well-established psychological variable 'future time perspective' was less relevant for saving in adolescents than found for saving in adults. It should be noted that the most important saving motive of adults is precaution, for which future time perspective is rather important. It is for example possible that in a group of adolescents who save out of precaution, there would be a link between saving and future time perspective.

How do adolescents save? (strategies)

The use of strategies to resist temptation and to control expenditure was investigated in all four studies. Strategy use and adolescents' beliefs in their ability to successfully apply them ('saving self-efficacy') seemed to be an important variable to take into account. Study 2 demonstrated a developmental shift from behavioural to cognitive strategies that is in keeping with adolescent development of cognitive self-regulation (Keating & Sasse, 1996). According to Keating (1990), the adolescents' spontaneous use of cognitive strategies and procedures seems to increase. In Study 3 and Study 4, saving strategy self-efficacy was measured in an attempt to show that one's own beliefs in one's ability to successfully use any of these strategies are important for saving to be considered as an option when confronted with an income constraint problem. Saving self-efficacy was related to authoritative parenting style and a mother who sees herself as an 'educator' when it comes to the saving behaviour of her adolescent child. In addition, saving self-efficacy was an important predictor of a general tendency to save. This stresses the need for self-regulatory skills and self-control for saving behaviour to be attempted and (successfully) performed. However, the use of cognitive strategies to resist temptation was not a significant predictor of someone's general tendency to save, when socio-economic, psychological, attitudinal, and behavioural variables were taken into account (Study 2, reported in Chapter 5). This might be an indication that the use of cognitive strategies is not superior to the use of behavioural strategies, for example, with regard to being successful at saving or with regard to considering saving as an option to deal with an income constraint problem. More precisely, while early adolescents and late adolescents may be *able* to use different strategies, this does not necessarily mean that their use of cognitive strategies is better. In terms of adolescent psychological development, the use of cognitive strategies could be considered an improvement. Yet, the use of a behavioural strategy, such as leaving money with a parent or putting it in a bank account, could also be considered an improvement in terms of adolescent psychological development, because it could be an indication of the adolescent's ability to think about thinking (metacognition²⁴). In addition, it could be an indication of the adolescent's realisation that in order to save, self-control is needed and that a behavioural strategy reduces the need for self-control. That is, the adolescent might use a behavioural strategy because of an anticipation of

²⁴ See Chapter 2, paragraph 2.3.2 and 2.3.3

future self-control problems. In the context of the economics of immediate gratification, O'Donoghue and Rabin (2000) labelled people who are able to foresee future self-control problems as 'sophisticated' and people who do not foresee future self-control problems as 'naive'. They described situations (activities with immediate costs, activities with immediate rewards) to illustrate in which the sophisticated and in which the naive will benefit. This shows that by no means is one approach generally better than the other (as the outcome will depend on the particular combination of the person and the context).

Attitudes towards saving, psychological variables and individual differences

The finding that most adults hold positive attitudes towards saving (Keynes, 1936; Katona, 1975) cannot simply be generalised to adolescents. In adolescence, saving seems to be predominantly associated with difficulties by those adolescent economic agents, who do not save. This means that in adolescence, saving self-efficacy, perceived difficulties with saving and conscientiousness are crucial for saving. It reveals that saving becomes a relevant option only when it is perceived as manageable. This is important for the research on saving in general as it indicates that saving could be considered 'pointless' by those who lack the belief in their ability to be successful at it. Furthermore, the difficulties experienced with lack of control and the frustration may result in a negative attitude towards saving.

The finding that conscientiousness was a significant predictor of saving at the age of 13 and 14 also supports the notion that saving is not easy and that self-control is needed to refrain from consumption.

The investigation of the importance of psychological variables for adolescent saving showed that compared to the results of saving research in adults (Nyhus, 2002), the explained variance of the adolescents' general tendency to save was high. However, the highest percentage was explained by the attitudinal variables. This again stresses that in adolescence, experienced difficulties are essential when it comes to the adolescents' perceptions of saving and their saving decisions. This finding supports part of the behavioural life cycle hypothesis (Shefrin & Thaler, 1988), which is the most psychological of the economic approaches to saving described in Chapter 1

(paragraph 1.3.1). The recognition that refraining from consumption can be difficult is reflected in the incorporation of self-control. Self-control and the development of self-control, as well as saving self-efficacy may be of paramount importance for the development of saving behaviour. To use their terms, the planner needs to believe that the doer is able to do what the planner wants him to do. To better understand the relationship between the planner and the doer, self-efficacy and self-regulatory skills may be useful variables to take into account also in research on adult saving. This has also been suggested by Engelberg (2005), who investigated the perception of self-efficacy in coping with economic risks among young adults. In her study, participants with high economic self-efficacy were more engaged in emotion management than their counterparts. She notes that this finding implies that “young people may not improve on their economic coping ability merely through understanding the virtues of sensible money management. The acquisition of skills underlying emotion management would presumably also entail an advantage” (p. 99). In this respect, Engelberg mentions the ability to cope with frustration and to be resilient.

Economic knowledge, attitudes towards saving, and adolescent saving

Walstad (1996) points out that economic knowledge affects people’s attitudes and opinions and according to him, attitudes and opinions have therefore a great potential to alter over time. In the studies presented in this thesis, a positive attitude towards saving was related to fewer difficulties, which indicates that adolescents’ attitudes towards saving are closely linked to their own performance. In addition, it seems that attitudes towards saving do change considerably in adolescence. Leiser and Ganin (1996) for example emphasize the importance of adolescence “as the age at which economic knowledge and attitudes become more systematic and better coordinated” (p. 105). In this context, they refer to the studies conducted by Ng (1983), Leiser (1983), Leiser et al. (1990), Furnham and Thomas (1984a), Berti and Bombi (1988), and Stacey (1982). The systematic investigation of adolescents’ saving attitudes presented in this thesis indicates that adolescence certainly is a period in which attitudes develop. Nevertheless, no firm statement can be made with regard to how stable these attitudes are and what their relationship with saving is at, for example, the age of 25.

When Furnham and Goletto-Tankel (2002) studied economic knowledge and understanding of saving in relation to young people's saving attitudes, they found that to predict saving attitudes, understanding of saving was not significant, while age and total amount saved were. The fact that total amount saved was significant indicates that this could be because a large amount saved might be the result of a whole series of positive saving experiences. The more money saved, the more successful someone was with saving or the easier someone found sticking to a savings plan. The studies on children's saving behaviour had already demonstrated that children can successfully save while having little knowledge about for example the function of saving. If I lack the self-control to save, I might not be helped by information about saving alone.

The distinction between knowledge and behaviour with regard to saving (and other financial management activities such as cash-flow management, credit management, and investment) was also made by Hilgert, Hogart, and Beverly (2003), who investigated the connection between knowledge with regard to household financial management. In their review of studies that report correlations between knowledge and behaviour, they note that while "those with more financial knowledge are also more likely to engage in recommended financial behaviors [...], this correlation does not necessarily mean, however, that an increase in knowledge improves behavior. Instead, the causality may be reversed in that people may gain knowledge as they save and accumulate wealth, or there may be a third variable, for example, family experiences and economic socialization, that affects both knowledge and behavior" (p. 311).

8.3.3 The family as context for saving in adolescence

One of the main goals for families as a social system is, according to Le Vine (1974), the economic goal, which involves parents fostering skills and behaviours the child will need for independent economic functioning as an adult.

Participants in the study by Canova et al. (2005) said that when young, saving had been encouraged by their parents and they also referred to upbringing, when talking

about saving as a habit. The research presented in this thesis supports such statements through showing the influence of perceived parenting style and mother's attitude 'educate' on the adolescents' general tendency to save. The results indicate that the assumption made by Ölander and Seipel (1970) that saving attitudes are deeply rooted with upbringing might hold true, since parenting style has an effect on skills that are important for being successful at saving when young. When Knowles and Postlewaite (2005) investigated whether children learn to save from their parents, they found that mothers have a stronger influence than fathers on the formation of their children's attitudes. In their study, mothers' attitudes predicted the savings of their children. While they used different measures (i.e. children's savings) and their data was drawn from different panel studies with more than one wave, this particular result seems to be in line with what has been found in Study 3 and Study 4. Although Knowles and Postlewaite put forward the possibility that children either learn through observation or through explanations, their study does not permit them to go any further than speculating about this. The research presented in this thesis on the contrary, indicates that while observation and explanation are important for learning, above all, the parenting style within which economic socialization occurs seems to matter.

An authoritative parenting style had a significant impact on adolescents' saving. The mechanisms through which the authoritative parenting style affects saving behaviour in adolescents are however unclear. Despite the relationships demonstrated between this style and a number of economically relevant skills (Study 3), knowing how the style is translated into concrete behaviours would better our understanding of the development of saving behaviour and possible ways to effectively encourage it.

Authoritative parents are thought to establish rules that are appropriate for the age of their child. An awareness of what is appropriate in the economic domain might also support economic socialization. An example of an age appropriate task that might give the adolescent child an opportunity for being successful at saving is the saving for a present for a friend. Authoritative parents are also characterised as demanding. But through which mechanisms authoritative parents facilitate saving skills in adolescents and which of the parenting style dimensions are affecting the child's money management and saving skills remain uncertain. With regard to the parenting

style dimensions, it could however be speculated that because saving (by adjusting expenditure) is a more independent way of dealing with an income constraint problem than for example relying on parents, choosing to save may be positively related to the parenting dimension 'autonomy granting' and negatively related to 'psychological control'. In general, authoritative parents are considered to be supportive and warm. The notion that parental warmth, acceptance and involvement are typical for parents perceived as authoritative and that the authoritative parenting style provides a good context for skills to be learned that are essential for saving suggests that the conclusion made by Pliner, Freedman, Abramovitch, and Drake (1996), namely that parental involvement in, and commitment to an allowance system appears to be vital, could have been the result of differences in the effectiveness of allowance systems by parents with differing parenting styles. Furthermore, the positive relationship found between perceived authoritative parenting and the saving behaviour of adolescents is in line with the suggestion made by Lassarre (1996), who arrived at the conclusion that giving an allowance paired with discussions of the family budget would be the best pocket money allocation strategy. That is, without having systematically investigated the relationship between parents' parenting style and adolescents' money management, these two studies support the view that involvement, warmth, commitment, as well as verbal give and take, have a positive impact on the economic socialization of adolescents.

The correlation between the attitudes of the parents and the adolescents revealed that there is consensus between mothers' attitude 'educator' and adolescents' attitude 'parents as guides'. This could also be interpreted as a good fit in terms of a person-context interaction. According to Lerner's goodness of fit model of person-context interaction (Lerner, 1986), a good fit means that the individual characteristics are in line with the characteristics or demands or expectations of significant others. Furthermore, the relevance of mothers' attitude 'educate' and its advantages with regard to the saving behaviour of the offspring stresses the importance of parental belief systems, or their particular view on childhood when it comes to their adolescent child's acquisition of saving skills. It seems to make a difference whether a parent (the mother in this case) adopts a 'protect' or 'educate' approach, a distinction made by Leiser and Ganin (1996) as well as Furnham (1993).

For adolescents to develop positive saving attitudes they should have plenty of opportunities to gain positive saving experiences. The context-oriented approach has helped identify relationships between the adolescent and the family environment (microsystem) that proved important for a number of measures that are related to saving skills and ultimately for an adolescents' general tendency to save. Because this measure taps into continuous saving as a form of expenditure control, it can be expected to reflect some kind of saving habit. While Lindqvist (1981) suggested that cash management is the most basic kind of saving, it could also be that in order to save, someone needs to be able to manage cash in the first place. In other words, cash management could also be the most basic precursor of saving.

The fact that for young adolescents (aged 13 to 14, Study 3 and Study 4) the context of the family seemed to matter not only for their attitudes (26 percent of the variance could be explained by parent variables) but also with regard to their behaviour (as reported) and beliefs (saving self-efficacy) indicates that overall, perceived parenting style is an important context variable for adolescent saving. It also suggests that there is more to be learned from this approach. Attention should be paid to the fact that in Study 3, adolescents who perceived their parents as 'neglectful-unengaged' had the lowest scores on all measures tested for. This emphasizes the strong impact of parental neglect on adolescent behaviour also in the economic domain.

8.4 Limitations

The studies reported in this thesis have three main limitations.

The first limitation is that all studies rely on self-report measures. The use of self-report measures with students as young as 11 on a topic they might find private, could cause inaccuracies associated with social desirability, worries about anonymity, or worries about giving right or wrong answers. In a number of areas, adolescents might not be *willing* to report accurately what they think and do, or, they might not be *able* to report things accurately. To address adolescents' willingness, care was taken to introduce the studies to the students in such a way, that students would be interested and recognise the importance of the subject for themselves. The

notion that children (and adolescents) provide reliable responses about events that are meaningful to them has been highlighted by Scott (2000). In addition, the studies were introduced in such a way that it was clear to everybody that the researcher was interested in opinions and experiences and that there were no right or wrong answers on this questionnaire. To address the issue that students might not have the ability to fill out the questionnaire independently, care was taken to design the questions in such a way that students could be expected to be able to work on it alone and that no questions were included for which one would have to ask one's parents (i.e. amount of savings in one's savings account; family income). Furthermore, while with saving research in adults, it can be difficult to obtain real data of the savings and total wealth of participants, it certainly is an advantage to have collected such data. With adolescents however, it was decided to use two saving measures, one that taps into someone's spontaneous saving inclination when confronted with an income constraint problem and another measure that taps into someone's general tendency to save. This means that the saving measures used in all four studies were different from saving measures used in research on adults and children. This should be considered when interpreting the results.

A second limitation is that a correlational approach was used throughout all studies. This restricts the conclusions one can draw. The relationships found throughout the studies are just that. This also applies to the model tested in the last study. Despite being statistically significant with proposed links in certain logical and theoretically predicted directions, no certain statement can be made about causality. This needs to be kept in mind when interpreting the results.

The third limitation is linked to the sampling. The first issue here is that the schools who took part in the research through volunteering their students were all state schools. The consequence of this is that the most affluent group of adolescents is not included. While Nyhus (2002) did not find differences in the importance of psychological variables for saving behaviour between low and high income groups, it is unclear what the effect of growing up in a more affluent family would be for the saving behaviour of adolescents. The second issue with regard to sampling is that all the data is gathered in the UK. It is important to bear in mind that cultural practices such as giving a regular sum of money on a set day (i.e. pocket money) are not

common in all countries. We know, for example, that in the UK, giving pocket money to children is quite common (Furnham, 1999; Furnham & Thomas, 1984a, 1984b; Webley & Plaisier, 1998). In addition, there is evidence that also in France (Lassarre, 1996) and in the Netherlands (Warnaar & Van Praag, 1997) children receive regular payment from their parents. Allowances are also paid to Iranian adolescents (Tashakkori & Mehryar, 1982) but in Italy and Greece for example, such a practice is uncommon (Webley, 2005) and in a study by Glover et al. (2005) some of the Asian parents reported that they don't give pocket money. The approach parents take to pocket money and allowances is likely to reflect their ideas about how to raise children (Webley, 2005). This has also been demonstrated in Study 4, where results showed that neglectful parents tend to control their adolescent child's saving less than parents using other parenting styles. Furthermore, the approaches to parenting are likely to differ in other countries too. Sociocultural factors may affect parenting styles (Assadi et al., 2007). While Rippl and Boehnke (1995) found no differences in proclivity to exhibit an authoritarian parenting style as perceived by adolescents from the three cultures America, West Germany, and East Germany, a study by Rudy and Grusec (2001) showed for example, that collectivism was related to authoritarian parenting in Egyptian-Canadian parents. However, the main purpose of using samples from just one country was that this provides at least a good account of relationships found in one population as a starting point (when not much is known in the area yet).

8.5 Further Research

The findings presented in this thesis provide first insights about the development of saving behaviour and saving attitudes during adolescence and about the context in which saving behaviour is learned. While most of the results were in line with the expectations and can be linked to the transition from childhood to adulthood, the studies have also generated more questions.

The findings that throughout adolescence, saving is a meaningful option for young people, that it becomes more important around the age of 16, and that at the same time it is difficult to perform, demonstrate that we can indeed learn a lot about a

behaviour through looking at the development of this behaviour (as suggested by Krause and Harbaugh, 1999). Because not much was known about the pathways through which saving skills are acquired, the studies drew on the knowledge of saving behaviour in adults as well as in children. At the outset, motives, strategies, and attitudes were considered to be important topics for the study of saving behaviour in adolescence. In Study 1 and Study 2, strategy use and experienced difficulties with saving appeared to be important themes that matter for saving in adolescence. Strategy use and saving self-efficacy are related to self-control. In Study 3 and Study 4, the experience of difficulties with saving was still one of the most important issues not only related to saving but also to perceived parenting style. This stresses the importance of self-control and ability to delay gratification for saving in adolescence. However, there are saving-aids that might help adolescents to deal with a general lack of self-control (such as leaving money with one's mother or someone else or putting money in a bank account), which indicates that to be successful at saving, the realization of one's problems with expenditure control can be rather helpful. This shows that a better understanding of the development of meta-knowledge and saving self-efficacy beliefs could advance our understanding of saving not only in adolescents but also in adults.

Besides self-control, the behavioural life cycle hypothesis incorporates mental accounting, and framing. Mental accounting and framing were not investigated in the research described here. Whereas evidence exists about the use of mental accounts in children (Webley & Plaisier, 1998), not much is known about the adolescents' use of mental accounts. However, investigating the importance of and developmental changes related to mental accounting and framing during adolescence, would help us better understand the psychological processes that are involved in saving behaviour in adults.

In addition, recent work (Rabinovich & Webley, 2007) has shown that there are two groups of adults who plan to save, those who make saving plans and succeed and those who make plans but fail to succeed. It would further our understanding about the successful use of effective saving strategies and the development of skills needed to become a saver, if these two groups could be identified and investigated during adolescence. Loewenstein (2000) discusses the limitations on the exercise of

willpower. Apparently, when people use self-control, it is not the short-term exercise of self-control but the long-term maintenance of self-control that distinguishes between those who are successful and those who are not.

Saving has been found to be associated with difficulties when young, but conscientious children reported less difficulties. Future research could further explore the links between personality factors and perceived difficulties with saving in older adolescents and adults. In addition, the processes that are involved in the development of effective saving strategies and saving self-efficacy could be investigated more in depth through for example longitudinal diary studies with adolescents who are currently trying to save up for something.

Having identified that the authoritative parenting style context seems to facilitate saving behaviour in adolescents, future research should address this parenting style more in detail in order to disentangle which aspects and dimensions are most important for the influence of this style on perceived difficulties with saving and adolescents' saving self-efficacy beliefs.

Furthermore, in order to establish whether the general parenting style approach *really* provides evidence for an effect of parenting behaviour on the (economic) behaviour of adolescent children, intervention studies and longitudinal studies are needed. These will help us understand the relationship between for example adolescents with a saving attitude that is characterized in terms of 'dependency on parents' and the parents' attitudes towards their adolescent child's saving that is characterized in terms of 'protection'.

While the authoritative parenting style provides a good context for adolescents to be successful at saving, the finding that the mother's attitude 'educate' proved to be important as well, strongly supports the relevance of Bandura's social learning theory (1977) in the economic socialization of adolescents. Mothers who thought of themselves as educators reported that they would try to be a good money management example to their adolescent child. This shows that they are aware of their function as a role model. It is therefore very likely that mothers who do manage their money wisely find it easier to model good money management behaviour and

future research should address this. The study by Bernheim, Garrett, and Maki (2001) on the long-term effects of the high school financial curriculum, for example, indicates that the saving behaviour of those people who took part in their study was strongly correlated with their perceptions of their parents' behaviour. For high school students with frugal parents, the curriculum did not seem to have the same positive effect as for high school students with non-frugal parents.

This thesis intended to build links between our knowledge of saving in children and the saving behaviour of adults. The research has laid the foundations for further research that could tie together saving in childhood and saving in adulthood. The next step in this direction would be to study adolescent saving behaviour longitudinally. This would help us to find out how important saving during adolescence is for saving during adulthood. In other words, future research should link the experiences made during adolescence and adolescents' general saving or spending tendencies with the saving behaviour of adults. This could be done through secondary data analysis of cohort studies (Ashby, 2009, is currently pursuing this approach) and following up the group of students who took part in Study 3 and Study 4. Such an investigation would ultimately help us understand how important the early years (and the family context) really are for becoming an adult economic agent. To date, we only have information from adults who suggested such links from studies asking retrospective questions.

What are the chances that an adolescent who saves at age 13 is also saving at age 23? Or what are the chances that an adolescent who did not save at age 15 is saving at age 25? To address these questions longitudinal studies are necessary and the context should be taken into account. Most of the measures devised in this thesis would be very helpful for further research in this area.

8.6 Implications

Saving is important to adolescents and approaching parents for more money is important too. The most important motives for saving during adolescence were goal saving, independence, and expenditure control. Investigating the role of parents and

putting the study of the development of saving behaviour in the social context of the family showed that parents play a central role in facilitating the saving behaviour of their adolescent child. Mothers' attitudes in particular seem to matter. From these findings there are a number of practical and theoretical implications.

8.6.1 Practical Implications

The findings of the research presented in this thesis are potentially helpful for parents, financial institutions, and policy makers.

Parents

The results provide evidence that educational attempts made by mothers are useful and can alter the difficulties adolescents face when trying to save as well as the adolescents' belief in their own ability to successfully apply saving strategies.

Parents can learn that their adolescent child benefits from an authoritative parenting style with regard to becoming a competent economic agent (regarding saving). On a more concrete level, it became evident that when mothers adopted an 'educator' role, this enabled their adolescent child to control his or her expenditure. How this can be done in practice can only be inferred from the literature on the development of self-efficacy, since the measures of parents' practices included in the study were only weakly related to adolescent saving behaviour. According to theory, "self-efficacy beliefs determine how people feel, think, motivate themselves, and behave" (Bandura, 1994, p. 71). Feelings of self-efficacy are shaped by several factors and past experiences as children develop. First, successful past experiences are important as people do not tend to set goals unless they believe that they have the ability to reach them. This suggests that it is important for parents to provide the setting for positive experiences for example through providing for saving opportunities that are appropriate for the age of the child. Second, self-efficacy is shaped through observation. Seeing others successfully perform a task increases the observer's confidence to try the task oneself. Finally, another way of increasing self-efficacy is simply through encouragement.

In addition, the results showed that adolescents treat money received from parents and earned money differently. In particular, adolescents in the research were more careful with money they had earned themselves. Given this, parents could encourage children to earn money as a means to indirectly foster saving behaviour and a more considered approach to money.

Financial institutions

Knowledge about the fact that mothers could play an important role in facilitating and promoting the saving behaviour of their adolescent children is also important to banks and building societies who try to encourage saving. In other words, the understanding of the relationship between the ‘educator’ attitude of mothers and their adolescent child’s perceived difficulties with saving can be used to improve communications aimed at young savers. Specifically, to influence adolescents, it may be important to also influence mothers.

Commercial communications aimed at adolescents could also make use of independence themes. Adolescents value independence and there are suggestions in this thesis that this might also be reflected in their saving behaviour. In addition, to promote saving in young people, their attempt to manage cash could be highlighted (the finding that in the first place, young people are goal savers is not new).

Finally, for young savers, the use of behavioural and cognitive strategies to resist temptation seemed appropriate and effective. Knowledge about these strategies might help banks to discover adolescents’ needs with regard to saving money and to help meet them, if innovative forms of bank accounts can be devised.

Public policy makers

The findings of this thesis are also important for public policy makers. Having identified that self-control, perceived difficulties with saving, and saving self-efficacy beliefs are important for adolescents’ perceptions and evaluations of saving

as well as their saving decisions, it becomes clear that financial education should address self-regulation and self-control issues. Personal finance education has recently been made compulsory in the UK (pfeg, 2007) and schools are advised to teach economic concepts. While knowledge of money management is certainly helpful in becoming financially literate, knowledge of certain economic policies and about saving (in theory) is not a good predictor for being successful at saving. Developers of educational programmes need to recognise that self-control, as well as the beliefs in one's ability to perform good money management are much more important. Therefore, such programmes should focus on how to help adolescents and adults develop strategies to maintain self-control.

The pfeg (Personal Finance Education Group) provides teaching resources on the Internet that is good for building knowledge (see <http://www.pfeg.org/>). However, the right skills should be promoted and focused on as well. Mothers for example could be given advice about how to provide for appropriate learning opportunities in the area of saving and expenditure control.

8.6.2 Theoretical Implications

Economic socialization

One implication from this thesis is that indirectly, the family context matters for the development of saving behaviour. This shows that while the adolescent was the unit of analysis, a context-oriented approach could be used to shed light on some of the processes through which adolescents' saving behaviour is promoted. The beneficial impact of parenting style as context for the development of skills that are important for being successful at saving could be accredited to the authoritative and the over-involved parenting style. This is in line with the findings of Soward (2006) and Morris (2003), and with the assumption that a warm and supportive family climate is important for the development of self-regulatory skills (Baumrind, 1971; Patock-Peckham, Cheong, Balhorn, & Nagoshi, 2001; Madigan, 2005). Considering the findings of Study 3 and Study 4, for economic socialization and saving in particular, differences in parental pocket money practices as well as parental consensus on pocket money issues (Furnham, 2001) can be considered secondary. What seems to

matter in the first place is an authoritative parent, that is, a parent that can best be described as a warm and sensitive negotiator. Darling and Steinberg (1993), who suggested that parenting style should be considered an environmental or 'emotional climate' variable, emphasize, that this 'emotional climate' is communicated not only by 'demandingness' and 'responsiveness', but also by tone of voice and body language. They further point out that there are other behaviours that can be regarded important components of the parenting task that are not captured in the parenting style measure. Two authoritative parents for example do not need to display their level of responsiveness in the same way. This illustrates that much can be learned from an approach that takes more specific parenting behaviours into account. While parental socialization efforts and parental modelling were found to influence academic achievement (Dornbusch, Ritter, Leiderman, Roberts, & Fraleigh, 1987) and health behaviours (Brooks-Gunn, 1993, as cited in Holmbeck, Paikoff, & Brooks-Gunn, 1996), the research presented in this thesis has demonstrated that parental socialization efforts also have some bearing on economic behaviours. That is, parenting seems to be related to the adolescents' level of preparedness for becoming good at saving. At best, the authoritative home provides an environment that helps the adolescent develop saving related skills. While the over-involved parents had a lot in common with the authoritative parents, the research provided empirical evidence for the distinct negative relationship between the parenting dimension 'psychological control' and the development of independence in an economic context. This is in keeping with the finding of Baumrind (1978) and Becker (1964), who both reported that 'psychological control' is correlated with dependency.

The finding that the attitude subscale 'educate' of the mothers towards their adolescent child's saving had an impact on the saving behaviour of the adolescent shows that parents' cognitions and belief systems can influence children in different ways. This is an area that has proved to be problematic. Darling and Steinberg (1993) hypothesised that parents' cognitions direct parents' child rearing-practices, but Cote and Bornstein (2000) for example found no relationship between the parenting attitudes professed by mothers and the activities of the mothers with their children. Considering the research by Okagaki and Bingham (2005), as well as Goodnow and Collins (1990), it can be said that the relationship between parental beliefs and

behaviours is not an easy one. However, the relationship found in the research presented in this thesis suggests that if a mother thinks of herself as an ‘educator’ with regard to the economic socialization of her adolescent child, this belief has an impact on the child because she is aware of a) her function as a role model, and b) her function as a teacher, who is involved and provides guidance.

The role model function further supports the relevance of social learning theory (Bandura, 1977; Bandura & Walters, 1963) for the development of saving behaviour as part of adolescent economic socialization. This is because the items used to tap into the attitude ‘educate’ included items about modelling (‘I try to demonstrate good financial management for my child in the handling of my own finances.’, and ‘By saving money myself, I set an example for my child.’). According to social learning theory, children (or adolescents) learn by observing and imitating the most relevant models. In the context of saving, the mothers turned out to be the relevant model for their adolescent child. The successful investigation of saving behaviour in the social context of the family suggests that it may also be beneficial for research in other economic areas (such as consumer debts) to consider person environment influences and interaction.

The teacher function can be found in the list of particular parenting behaviours Holmbeck, Paikoff, and Brooks-Gunn (1996) specified to be associated with favourable (general) adolescent outcomes. In their discussion on what is unique to the parenting of adolescents, they, among other behaviours, emphasize the beneficial effect of parents who “provide information to the adolescent and aid the adolescent in developing useful skills” (p. 104).

The importance of self-control

Another implication from this thesis is the significance of the development of self-controlling strategies for adolescents to be optimistic and positive about (their) saving.

First, this finding stresses the importance of the behavioural life cycle hypothesis, which incorporates self-control, mental accounting, and framing. While mental

accounting and framing was not investigated, the self-control aspect is certainly supported. It implies that saving behaviour has similarities with other behaviours that necessitate self-control and that it is possible that mechanisms similar to those involved in the acquisition of these other behaviours are also at work in the saving context. The development of self-control has been investigated by a number of researchers. Logue (1995) distinguishes between a number of factors that could be responsible for age-related changes in self-control, such as perceptiveness, experience with delayed gratification, intelligence, speech or verbal behaviour, level of activation, experience with effort, and acquisition of general self-controlling strategies. In the saving context, it is conceivable that parents could provide for opportunities that allow the child to gain experience with effort. Metcalfe and Mischel (1999) distinguished between a hot 'go system', which is considered to be impulsive, and cool 'know system', which is considered to be cognitive (Metcalfe & Mischel, 1999, as cited in Webley & Nyhus, 2008). While the hot system is assumed to be present at birth, the cool system is considered to develop slowly when children grow older. The idea of these two systems resembles the distinction made by Shefrin and Thaler (1988) between the planner and the doer (the two-self model that consists of two competing forces, see Chapter 2, paragraph 1.3.1). In addition, Webley and Nyhus refer to the work by Camerer, Loewenstein and Prelec (2005) when they point out that the idea of these two systems has been supported by recent developments in neuro-economics.

Second, this finding suggests that for understanding adolescent saving, it might be reasonable to think of Katona's (1975) theory of saving in a different way. That is, for adolescents, who are more impulsive than adults (Pechman, Levine, Loughlin, & Leslie, 2005) and who are yet to master self-controlling strategies and techniques, the ability to save/ consume does not only depend on the economic variable 'disposable income', but also on their general psychological development, which will impact on their self-regulatory skills. In other words, the assumption that because adolescents normally do not pay for their living expenses, they should by nature and in principle be able to save (as noted in Chapter 2, paragraph 2.3.4) holds only true when one is to look at economic variables alone. However, recognising adolescent psychological development makes the case that adolescents should by nature be less able to save than adults. Because of the relevance of self-control for saving, it is conceivable that

adolescents find saving difficult and in addition, it also is reasonable that they find it more difficult than adults.

Links between adult and adolescent saving

The finding that in Study 4, conscientiousness plays a role in saving during adolescence supports the findings of research on adults and indicates that individual differences affect saving behaviour when young. It suggests that personality factors may also be linked to the development of saving habits and the perceived ease of saving before becoming an adult economic agent. An implication of this thesis is that a number of relationships found in research on adults have also been found in adolescents. This suggests that these are significant for saving behaviour in general. The relationships of these variables with saving intentions and saving self-efficacy beliefs should be further investigated.

As adolescents are likely to become better at what they are already good at and because experience with delaying gratification or experience with effort are important training grounds for learning to save and for becoming good at saving, it could be speculated that older adolescents who as young adolescents were good at saving, become even better at it. To systematically address the issue of continuity and discontinuity with regard to saving in adolescents and young adulthood, for example, longitudinal research is needed.

Based on the results of the research presented in this thesis, it is conceivable that parents who talk about saving and money management in a way that is consistent with their own saving behaviour and money management, might facilitate their child's saving behaviour, because those children do receive just one message (a parental norm or idea that is congruent with the parents' behaviour). More specifically, the findings that children think of saving as something that is good, something one should do (without liking it or being good at it: Sonuga-Barke & Webley, 1993), and that adolescents on the one hand do report to save out of precaution (a norm or idea transmitted by parents) while on the other do report to save for goals, suggest that ideas about saving and the actual saving behaviour are learnt separately. Therefore, it could be that the saving behaviour of adolescents and

children is related to the saving behaviour of their parents, either because the children are influenced by what they observe about their parents' behaviour or by what their parents tell them. As a result, the greatest positive influence on the saving behaviour of adolescents should have parents who are described authoritative by their adolescent child, and who at the same time are successful at saving themselves.

From the research on the attitudes towards saving, we have learned, that for adolescents to be convinced that saving is a good thing, they need to be able to save and consider saving a manageable option as well. This indicates, that on their way to becoming an economic agent with regard to dealing with an income constraint problem, adolescents benefit from (authoritative) parents who help them becoming effective as savers.

This thesis has extended our knowledge of saving behaviour in general by providing empirical evidence that saving is an option for young people who (still) live at home (where living costs are covered for by parents). This supports the idea that saving can serve more functions than providing for future consumption, it can also be used to control expenditure (Marshall, 1966).

8.7 Conclusion

Saving behaviour is assumed to be learned early in life. This thesis has investigated adolescents' saving behaviour in depth using an economic socialization approach that places saving in the social context of the family. It has established the relative importance of saving in adolescence, when saving alternatives are taken into account. Contrary to the widely held beliefs that young people are considered 'spenders', the empirical work presented in this thesis attests that adolescent economic agents do think of saving as a means of getting larger sums of money, but they also draw upon their parents for financial support. Not only did this finding empirically justify an in-depth investigation of the adolescent saver, it also highlighted that the behaviour and the choices of the adolescent economic agent are embedded in the family and should be investigated as such. The research revealed that for adolescents, saving is

associated with difficulties. This strongly suggests that the development of saving behaviour is related to the development of self-control.

This thesis has provided the first empirical evidence that parenting style can promote the development of skills that are important for saving. The thesis has demonstrated that a context oriented approach is beneficial to the study of the development of economic behaviour. A model has been tested that shows how the behaviour of parents is related to the saving behaviour of their adolescent child. The research presented in this thesis not only contributes to academic knowledge, but has also practical implications for public policy, financial institutions, and parents.

References

- Abramovitch, R., Freedman, J. L., & Pliner, P. (1991). Children and money: Getting an allowance, credit versus cash, and knowledge of pricing. *Journal of Economic Psychology, 12*, 27-45.
- Adams, T., & Moore, M. (2007). High-risk health and credit behavior among 18- to 25-year-old college students. *Journal of American College Health, 56*, 2, 101-108.
- Ainslie, G. (1975). Specious reward: A behavioural theory of impulsiveness and impulse control. *Psychological Bulletin, 82*, 463-496.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*, 179-211.
- Alessie, R. A., Lusardi, A., & Aldershof, T. (1997). Income and wealth over the life-cycle: Evidence from panel data. *Review of Income and Wealth, 43*, 1-32.
- Allen, M. W., & Ng, S. H. (2004). Economic behavior. In C. Spielberger (Ed.), *Encyclopedia of Applied Psychology* (pp. 661-666). Academic Press.
- Arias, D. F., & Hernández, A. M. (2007). Emerging adulthood in Mexican and Spanish youth: Theories and realities. *Journal of Adolescent Research, 22*, 476-503.
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist, 55*, 469-480.
- Ashby, J. (2009). *Save now, save later?: Tying together saving behaviour in adolescence and adulthood*. PATHWAYS Group Meeting, Jacobs Foundation: Institute of Education, University of London, UK, June 8.
- Ashton, M. C., Lee, K., Perugini, M., Szarota, P., de Vries, R. E., Di Blas, L., Boies, K., & De Raad, B. (2004). A six-factor structure of personality-descriptive adjectives: Solutions from psycholexical studies in seven languages. *Journal of Personality and Social Psychology, 86*, 356-366.
- Assadi, S. M., Zokaei, N., Kaviani, H., Mohammadi, M. R., Ghaeli, P., Gohari, M. R., & Vijver, F. J. R. van de (2007). Effect of sociocultural context and parenting style on scholastic achievement among Iranian adolescents. *Social Development, 16*, 169-180.
- Aunola, K., Stattin, H., & Nurmi, J.-E. (2000). Parenting styles and adolescents' achievement strategies. *Journal of Adolescence, 23*, 205-222.
- Azar, O. H. (2007). Relative thinking theory. *Journal of Socio-Economics, 36*, 1-14.
- Baele, A., & Vlerick, P. (2000). Pocket money and saving behaviour of children: a qualitative study. In E. Hölzl (Ed.), *Fairness and cooperation: IAREP/SABE conference proceedings*, Baden/Vienna, Austria: WUV.
- Bagozzi, R. P., & Edwards, E. A. (1998). Goal setting and goal pursuit in the regulation of body weight. *Psychology & Health, 13*, 593-621.
- Ballinger, T. P., Palumbo, M. G., & Wilcox, N. T. (2003). Precautionary saving and social learning across generations: An experiment. *The Economic Journal, 113*, 920-947.
- Bandura, A. (1977). *Social learning theory*. Englewood Cliffs, NJ: Prentice-Hall.
- Bandura, A. (1986). *Social foundations of thought and action: A social cognitive theory*. Englewood Cliffs, NJ: Prentice-Hall.

- Bandura, A. (1994). Self-efficacy. In V. S. Ramachaudran (Ed.), *Encyclopedia of human behavior* (Vol. 4, pp. 71-81). New York: Academic Press.
- Bandura, A., & Walters, R. H. (1963). *Social learning and personality development*. New York: Holt, Rinehart, and Winston.
- Barber, B. K. (1994). Cultural, family, and personal contexts of parent-adolescent conflict. *Journal of Marriage and the Family*, *56*, 375-386.
- Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development*, *67*, 3296-3319.
- Barnet-Verzat, C., & Wolff, F.-C. (2002). Motives for pocket money allowance and family incentives. *Journal of Economic Psychology*, *23*, 339-366.
- Bates, J. E., & Pettit, G. S. (2007). Temperament, parenting, and socialization. In J. E. Grusec, & P. D. Hastings (Eds.), *Handbook of socialization* (pp. 153-177). New York: The Guilford Press.
- Baumrind, D. (1967). Child care practices anteceding three patterns of preschool behavior. *Genetic Psychology Monographs*, *75*, 43-88.
- Baumrind, D. (1971). Current patterns of parental authority. *Developmental Psychology*, *4*, 1-103.
- Baumrind, D. (1978). Parental disciplinary patterns and social competence in children. *Youth and Society*, *9*, 239-276.
- Baumrind, D. (1991). Effective parenting during the early adolescent transition. In P. A. Cowan, & E. M. Hetherington (Eds.), *Family transitions* (pp. 111-164). London: Lawrence Erlbaum Associates
- BBC News (2008). *Parents back school money lessons*. Retrieved on 11 November, 2008, from <http://news.bbc.co.uk/1/hi/business/7195713.stm>
- Becker, W. C. (1964). Consequences of different kinds of parental discipline. In M. L. Hoffman, & W. W. Hoffman (Eds.), *Review of child development research* (Vol. 1, pp. 169-208). New York: Russell Sage Foundation.
- Bell, R. Q. (1968). A reinterpretation of the direction of effects in studies of socialization. *Psychological Review*, *75*, 81-95.
- Bell, R. Q., & Chapman, M. (1986). Child effects in studies using experimental or brief longitudinal approaches to socialization. *Developmental Psychology*, *22*, 595-603.
- Belsky, J. (1981). Early human experience: A family perspective. *Developmental Psychology*, *17*, 3-23.
- Bem, D. (1972). Self-perception theory. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 6). New York: Academic Press.
- Bembenutti, H., & Karabenick, S. A. (2004). Inherent association between academic delay of gratification, future time perspective, and self-regulated learning. *Educational Psychology Review*, *16*, 35-57.
- Bernheim, B. D., Garrett, D. M., & Maki, D. M. (2001). Education and saving: The long-term effects of high school financial curriculum mandates. *Journal of Public Economics*, *80*, 435-465.
- Bernheim, B., & Rangel, M. (2007). Behavioral public economics: Welfare and policy analysis with non-standard decision-makers. In P. Diamond, & H. Vartiainen (Eds.), *Behavioral economics and its applications* (pp. 7-84). Princeton, NJ: Princeton University Press.
- Berti, A. E., & Bombi, A. S. (1988). *The child's construction of economics*. Cambridge, UK: Cambridge University Press.
- Beyers, W., Goosens, L., Vansant I., & Moors, E. (2003). A structural model of autonomy in middle and late adolescence: Connectedness, separation, detachment, and agency. *Journal of Youth and Adolescence*, *32*, 351-365.

- Bodnar, J. (1996). *Mom, can I have that? Dr. Tightwad answers your questions about money*. Washington, D.C., USA: Kiplinger Books.
- Bodnar, J. (1997). *Dr. Tightwad's money-smart kids* (2nd ed.). Washington, D.C., USA: Kiplinger Books.
- Bornstein, M. H. (2006). Parenting science and practice. In K. A. Renninger, I. E. Sigel, W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology, Vol 4: Child psychology in practice* (6th ed., pp. 893-949). Hoboken, NJ, US: John Wiley & Sons.
- Bowes, J. M., Flanagan, C., & Taylor, A. J. (2001). Adolescents' ideas about individual and social responsibility in relation to children's household work: Some international comparisons. *International Journal of Behavioral Development, 25*, 60-68.
- Brandtstädter, J. (2006). Action perspectives on human development. In R. M. Lerner (Ed.), *Handbook of child psychology, Vol. 1: Theoretical models of human development* (6th ed., pp. 516-568). New York: Wiley.
- Brandstätter, H. (1988). Sechzehn Persönlichkeits-Adjektivskalen (16PA) als Forschungsinstrument anstelle des 16PF [Sixteen personality adjective scales as a substitute of the 16PF]. *Zeitschrift für Experimentelle und Angewandte Psychologie, 13*, 53-63.
- Brandstätter, H. (1993). Should economic psychology care about personality structure? *Journal of Economic Psychology, 14*, 473-494.
- Brandstätter, H. (1996). Saving, income and emotional climate of households related to personality structure (VSB-CentER Savings Project Progress Report No. 38). Tilburg, The Netherlands: CentER for Economic Research, Tilburg University.
- Brandtstädter, J., & Lerner, R. M. (Eds.). (1999). *Action and self-development: Theory and research throughout the life span*. Thousand Oaks, CA: Sage.
- Brim, O. G., Jr. (1966). Socialization through the life cycle. In O. G. Brim, Jr., & S. Wheeler (Eds.), *Socialization after childhood: Two essays* (pp. 1-49). New York: Wiley.
- British Embassy (2007). Retrieved September 2, 2007, from http://www.uknow.or.jp/uknow_e/about/100faqs/qa07.htm
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist, 32*, 513-531.
- Bronfenbrenner, U. (1979). *The ecology of human development*. Cambridge, MA: Harvard University Press.
- Bronfenbrenner, U. (1991, April). Discussant's commentary. In S. Lamborn (Chair), *Authoritative parenting and adolescent development*. Symposium presented at the biennial meetings of the Society for Research in Child Development, Seattle.
- Bronfenbrenner, U. (1993). The ecology of cognitive development: Research models and fugitive findings. In R. H. Wozinak, & K. Fischer (Eds.), *Scientific environment*. Hillsdale, NJ: Erlbaum
- Bronfenbrenner, U. (1994). Ecological models of human development: Research models and fugitive findings. In R. H. Wozinak, & K. Fischer (Eds.), *Scientific environments*. Hillsdale, NJ: Erlbaum.
- Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In R. M. Lerner (Ed.), *Handbook of Child Psychology, Vol. 1: Theoretical models of human development* (6th ed.). Hoboken, NJ: Wiley.
- Brooks-Gunn, J. (1993). Why do adolescents have difficulty adhering to health regimes? In N. A. Krasnegor, L. Epstein, S. B. Johnson, & S. J. Yaffe (Eds.), *Developmental aspects of health compliance behavior* (pp. 125-152). Hillsdale, NJ: Lawrence Erlbaum Associates.

- Brown, B. B., Mounts, N., Lamborn, S. D., & Steinberg, L. (1993). Parenting practices and peer group affiliation in adolescence. *Child Development*, 64, 467-482.
- Browning, M., & Lusardi, A. (1996). Household saving: Micro theories and micro facts. *Journal of Economic Literature*, 34, 1797-1855.
- Burgoyne, C. B., Reibstein, J., Edmunds, A., & Dolman, V. (2007). Money management systems in early marriage: Factors influencing change and stability. *Journal of Economic Psychology*, 28, 214-228.
- Burris, V. (1981). *The child's conception of economic relations: A study of cognitive socialization*. Paper presented at the annual meeting of the American Sociological Association, Toronto.
- Burris, V. (1983). Stages in the development of economic concepts. *Human Relations*, 36, 791-812.
- Cairns, R. B., & Cairns, B. D. (2006). The Making of Developmental Psychology. In W. Damon, & R. M. Lerner (Eds.), *Handbook of child psychology, Vol. 1: Theoretical models of human development* (6th ed., pp. 89-165). Hoboken, NJ, US: John Wiley & Sons.
- Camerer, C. F., & Loewenstein, G. (2004). Behavioral economics: Past, present, future. In C. F. Camerer, G. Loewenstein, & M. Rabin (Eds.), *Advances in Behavioral Economics* (pp. 3-51). Princeton, New Jersey: Princeton University Press.
- Camerer, C., Loewenstein, G., & Prelec, D. (2005). Neuroeconomics: How neuroscience can inform economics. *Journal of Economic Literature*, 43, 9-64.
- Campbell, E. Q. (1969). Adolescent socialization. In: D. A. Goslin (Ed.), *Handbook of socialization theory and research* (pp. 821-859). USA: Rand McNally & Company.
- Camphuis, H., & Ketelaars, M. (1995). *Variable Documentation VSB panel 1993*. Retrieved September 23, 2007 from <http://cdata4.uvt.nl/css/documentation/doc93en.pdf>
- Canova, L., & Manganelli Rattazzi, A. M. (2004). Personality, past behaviour and saving intention: A test of an extended model of the theory of planned behaviour. *SABE/IAREP conference proceedings, Philadelphia, USA*.
- Canova, L., Manganelli Rattazzi, A. M., & Webley, P. (2005). The hierarchical structure of saving motives. *Journal of Economic Psychology*, 26, 21-34.
- Caprara, G. V., Steca, P., Gerbino, M., Paciello, M., & Vecchio, G. M. (2006). Looking for adolescents' well-being: Self-efficacy beliefs as determinants of positive thinking and happiness. *Epidemiologia-e-Psichiatria-Sociale*, 15, 30-43.
- Carlson, L., Laczniak, R. N., & Walsh, A. (2001). Socializing children about television: An intergenerational study. *Journal of the Academy of Marketing Science*, 29, 276-288.
- Catherwood, D., & Gillibrand, R. (2004). *Developmental psychology*. Glasgow: Bell & Bain Ltd.
- Cattell, R. B. (1965). *The scientific analysis of personality*. New York: Penguin Books
- Chan, D. W. (2007). Positive and negative perfectionism among chinese gifted students in Hong Kong: Their relationships to general self-fficacy and subjective well-being.
- Chen, H., & Volpe, R. P. (1998). An analysis of personal financial literacy among college students. *Financial Services Review*, 7, 107-128.
- Churchill, G. A., & Moschis, G. P. (1979). Television and interpersonal influence on adolescent consumer learning. *Journal of Consumer Research*, 6, 23-35.

- Claes, M., Lacourse E., Bouchard, C., & Perucchini, P. (2003). Parental practices in late adolescence, a comparison in three countries: Canada, France and Italy. *Journal of Adolescence*, *26*, 387-399.
- Clark, L., Kochanska, G., & Ready, R. (2000). Mother's personality and its interaction with child temperament as predictors of parenting. *Journal of Personality and Social Psychology*, *79*, 274-285.
- Coats, A. W. (1976). Economics and psychology: The death and resurrection of a research programme. In: S. Latsis, (Ed.), *Method and appraisal in economics*. Cambridge, UK: Cambridge University Press.
- Coleman, J. C., & Hendry, L. B. (1999). *The nature of adolescence* (3rd ed.) London: Routledge.
- Collins, W. A. (1995). Relationships and development: Family adaptation to individual change. In S. Shulman (Ed.), *Close relationships and socioemotional development* (pp. 128-154). New York: Ablex.
- Collins, W. A., & Madsen, S. D. (2003). Developmental change in parenting interactions. In L. Kuczynski (Ed.), *Handbook of dynamics in parent-child relations* (pp. 49-66). Thousand Oaks, CA: Sage.
- Collins, W. A., & Steinberg, L. (2008). Adolescent development in interpersonal context. In W. Damon, & R. M. Lerner (Eds.), *Child and adolescent development: An advanced course* (pp. 551-590). Hoboken, NJ: John Wiley & Sons.
- Collins, W. A., Gleason, T., & Sesma, A., Jr. (1997). Internalization, autonomy, and relationships: Development during adolescence. In J. E. Grusec & L. Kuczynski (Eds.), *Parenting and children's internalization of values: A handbook of contemporary theory* (pp. 78-99). New York: Wiley.
- Collins, W. A., Maccoby, E. E., Steinberg, L., Hetherington, E. M., & Bornstein, M. H. (2000). Contemporary research on parenting: The case for nature and nurture. *American Psychologist*, *55*, 218-232.
- Compas, B. E., Hinden, B. R., & Gerhardt, C. A. (1995). Adolescent development: pathways and processes of risk and resilience. *Annual Review of Psychology*, *46*, 265-293.
- Costa, P. T. Jr., & McCrae, R. R. (1998). Six approaches to the explication of facet-level traits: Examples from conscientiousness. *European Journal of Personality*, *12*, 117-134.
- Cote, L. R., & Bornstein, M. H. (2000). Social and didactic parenting behaviors and beliefs among Japanese American and South American mothers of infants. *Infancy*, *1*, 363-374.
- Damon, W., & Lerner, R. M. (Eds.). (2008). *Child and adolescent development: An Advanced Course*. Hoboken, NJ: John Wiley & Sons.
- Daniel, T. R. (1995). Preference for delayed gratification and saving behaviour. *IAREP Conference proceedings, Bergen, NOR*.
- Daniel, T. R. (1997). The economic psychology of saving: The role of individual differences associated with intertemporal choice. *IAREP Conference proceedings, Valencia, ESP*.
- Darling, N., & Steinberg, L. (1993). Parenting style as context: An integrative model. *Psychological Bulletin*, *113*, 487-496.
- Davis, W. L., & Phares, E. J. (1969). Parental antecedents of internal-external control of reinforcement. *Psychological Reports*, *24*, 427-436.
- Dick, D. M., Viken, R., Purcell, S., Kaprio, J., Pulkkinen, L., & Rose, R. J. (2007). Parental monitoring moderates the importance of genetic and environmental

- influences on adolescent smoking. *Journal of Abnormal Psychology*, *116*, 213-218.
- Dickins, D., & Ferguson, V. (1957). *Practices and attitudes of rural while children concerning money*. (Technical report No. 43) MS. Mississippi State College, Agricultural Experimental Station.
- Dickinson, A. (1996). Financial well-being of women and the family. *The American Journal of Family Therapy*, *24*, 65-73.
- Dornbusch, S. M., Ritter, P. L., Leiderman, P. H., Roberts, D. F., & Fraleigh, M. J. (1987). The relation of parenting style to adolescent school performance. *Child Development*, *58*, 1244-1257.
- Doss, V. S., Marlowe, J., & Godwin, D. D. (1995). Middle-school children's sources and uses of money. *The Journal of Consumer Affairs*, *29*, 219-241.
- Douvan, E. A. M., & Adelson, J. (1966). *The adolescent experience*. New York: Wiley.
- Duesenberry, J. S. (1949). *Income, Saving and the Theory of Consumer Behaviour*. Cambridge, Mass.: Harvard University Press.
- Eastin, M. S., Greenberg, B. S., & Hofschire, L. (2006). Parenting the Internet. *Journal of Communication*, *56*, 486-504.
- Elder, G. H. (1998). The life course as developmental theory. *Child Development*, *69*, 1-12.
- Elder, G. H. Jr., & Shanahan, M. J. (2006). The life course and human development. In R. M. Lerner, & W. Damon (Eds.), *Handbook of child psychology* (6th ed.): Vol 1, Theoretical models of human development (pp. 665-715). Hoboken, NJ, US: John Wiley & Sons.
- Elder, G. H., Jr., & O'Rand, A. M. (1995). Adult lives in a changing society. In K. S. Cook, G. A. Fine, & J. S. House (Eds.), *Sociological perspectives on social psychology* (pp. 452-475). Boston: Allyn & Bacon.
- Ellis-Schwabe, M., & Thornburg, H. D. (1986). Conflict areas between parents and their adolescents. *The Journal of Psychology*, *120*, 59-68.
- Engelberg, E. (2007). The perception of self-efficacy in coping with economic risks among young adults: An application of psychological theory and research. *International Journal of Consumer Studies*, *31*, 95-101.
- Epley, N., Mak, D., & Idson, L. C. (2006). Bonus of rebate?: The impact of income framing on spending and saving. *Journal of Behavioral Decision Making*, *19*, 213-227.
- Erikson, E. H. (1950). *Childhood and society*. New York: Norton.
- Erikson, E. H. (1959). *Identity and the life cycle*. Psychological Issues. Monograph 1, 1, New York: International University Press.
- Estess, P. S., & Barocas, I. (1994). *Kids, money & values*. Cincinnati, Ohio: Betterway Books.
- Faber, R. J., & Vohs, K. D. (2004). To buy or not to buy? Self-control and self-regulatory failure in purchase behavior. In R. R. Baumeister, & K. D. Vohs (Eds.), *Handbook of Self-Regulation: Research, Theory, and Application* (pp. 509-524). New York: Guilford Press.
- Fang, X., & Dong, Q. (1998). Parent-child conflicts in 1st- and 2nd-year junior high school students. *Psychological Science (China)*, *21*, 122-125.
- Feather, N. T. (1991). Variables relating to the allocation of pocket money to children: Parental reasons and values. *British Journal of Social Psychology*, *30*, 221-234.
- Festinger, L. (1957). *A theory of cognitive dissonance*. Stanford, CA: Stanford University Press.

- Fiates, G. M. R., Amboni, R. D. M. C., & Teixeira, E. (2008). Consumer behaviour of Brazilian primary school students: Findings from focus group interviews. *International Journal of Consumer Studies*, 32, 157-162.
- Fiedler, K., & Wänke, M. (2001). Psychology and economics. In N. J. Smelser (Ed.), *International Encyclopedia of the Social & Behavioral Sciences* (Vol 18, pp. 12390-12396). Amsterdam: Elsevier.
- Fife-Schaw, C. (2000). Survey and sampling issues. In G. M. Breakwell, S. Hammond, & C. Fife-Schaw (Eds.), *Research methods in psychology* (pp. 88-104). London, UK: Sage.
- Finkenauer, C., Engels, R. C. M. E., & Baumeister, R. F. (2005). Parenting behaviour and adolescent behavioural and emotional problems: The role of self-control. *International Journal of Behavioural Development*, 29, 58-69.
- Fletcher, A. C., Darling, N. E., Steinberg, L., & Dornbusch, S. M. (1995). The company they keep: Relation of adolescents' adjustment and behavior to their friends' perceptions of authoritative parenting in the social network. *Developmental Psychology*, 31, 300-310.
- Flouri, E. (2004). Correlates of parents' involvement with their adolescent children in restructured and biological two-parent families: The role of child characteristics. *International Journal of Behavioral Development*, 28, 148-156.
- Flouri, E. (2008). Temperament influences on parenting and child psychopathology: Socio-economic disadvantage as moderator. *Child Psychiatry & Human Development*, 39, 369-379.
- Freud A. 1969. Adolescence as a developmental disturbance. In G. Caplan, & S. Ledovici (Eds.), *Adolescence: Psychosocial Perspectives* (pp. 5-10). Cambridge, MA: Harvard Univ. Press.
- Friedman, W. J. (1957). Developmental and cognitive perspectives on humans' sense of the times of past and future events. *Learning and Motivation*, 36, 145-158.
- Friedman, W. J. (2000). The development of children's knowledge of the times of future events. *Child Development*, 71, 913-932.
- Furnham, A. (1984). Many sides of the coin: The psychology of money usage. *Personality and Individual Differences*, 5, 501-509.
- Furnham, A. (1985). Why do people save? Attitudes to, and habits of, saving money in Britain. *Journal of Applied Social Psychology*, 15, 354-373.
- Furnham, A. (1993). *Reaching for the counter. The new child consumers: Regulation or education*. London: Social Affairs Unit.
- Furnham, A. (1999). Economic socialization: A study of adults' perceptions and uses of allowances (pocket money) to educate children. *British Journal of Developmental Psychology*, 17, 585-604.
- Furnham, A. (2001). Parental attitudes to pocket money/allowances for children. *Journal of Economic Psychology*, 22, 397-422.
- Furnham, A., & Goletto-Tankel, M.-P. (2002). Understanding savings, pensions and life assurance in 16-21-year-olds. *Human Relations*, 55, 603-628.
- Furnham, A., & Kirkcaldy, B. (2000). Economic socialization: German parents' perceptions and implementation of allowances to educate children. *European Psychologist*, 5, 202-215.
- Furnham, A., & Thomas, P. (1984a). Pocket money: A study of economic education. *British Journal of Developmental Psychology*, 2, 205-212.
- Furnham, A., & Thomas, P. (1984b). Adults' perceptions of the economic socialization of children. *Journal of Adolescence*, 7, 217-231.
- Gilbreth, F. B., & Gilbreth Carey, E. (1953). *Cheaper by the dozen*. London: Hazell Watson & Viney Limited.

- Gjesme, T. (1979). Future time orientation as a function of achievement motives, ability, delay of gratification, and sex. *Journal of Psychology*, *101*, 173-188.
- Gjesme, T. (1996). Future time orientation and motivation. In T. Gjesme & R. Nygard (Eds.), *Advances in motivation* (pp. 210-224). Boston: Scandinavian Univ. Press.
- Glover, M., Nosa, V., Paynter, J., Wong, G., Scragg, R., & Freeman, B. (2005). *Parental attitudes towards the uptake of smoking by children*. Auckland: University of Auckland, ASH & AUT, The Auckland Tobacco Control Research Group.
- Golden, P. G. (1969). A review of children's reports of parental behaviours. *Psychological Bulletin*, *71*, 222-235.
- Goodnow, J. J. (1988). Children's household work: Its nature and functions. *Psychological Bulletin*, *103*, 5-26.
- Goodnow, J. J., & Collins, W. A. (1990). *Development according to parents: The nature, sources, and consequences of parents' ideas*. Hillsdale, NJ: Erlbaum.
- Goszczyńska, M. (1996). Home economic education of polish adolescents – after six years of experience with the free market. *IAREP Conference proceedings*, Paris, FRA.
- Gottlieb, G., Wahlsten, D., & Lickliter, R. (2006). The significance of biology for human development: A developmental psychobiological systems view. In R. Lerner (Ed.), *Handbook of Child Psychology: Vol. 1. Theoretical models of human development* (6th ed., pp. 210-257). Hoboken, NJ: Wiley.
- Gough HG. (1957). *Manual for the California Psychological Inventory*. Palo Alto, CA: Consulting Psychologists Press.
- Gray, P. S., Williamson, J. B., Karp, D. A., & Dalphin, J. R. (2007). *The research imagination. An introduction to qualitative and quantitative methods*. Cambridge: Cambridge University Press.
- Greene, A. L. (1986). Future-time perspective in adolescence: The present of things future revisited. *Journal of Youth and Adolescence*, *15*, 99-113.
- Gregg, P., & Harkness, S. (2003). *Welfare reform and lone parents employment in the UK*. CMPO Working Paper Series No. 03/072.
- Griffin, C., Phoenix, A., Croghan, R., Hunter, J., & Fowler, G. (2005). *Young consumers: A study of the meaning of consumption for young people*. Unpublished mimeo.
- Groenland, E. A. G. (1999). Saving. In P. E. Earl, & S. Kemp (Eds.), *The Elgar Companion to consumer research and economic psychology* (pp. 516-524). Cheltenham: Edward Elgar.
- Groenland, E. A. G., Bloem, J. G., & Kuylen, A. A. A. (1996). Prototypicality and structure of the saving concept for consumers. *Journal of Economic Psychology*, *17*, 691-708.
- Grusec, J. E., & Davidov, M. (2007). Socialization in the family: The roles of parents. In J. E. Grusec, & P. D. Hastings (Eds.), *Handbook of socialization: Theory and research* (pp. 284-308). New York, NY, US: Guilford Press.
- Gunter, B., & Furnham, A. (1998). *Children as consumers*. London: Routledge.
- Hall, G. S. (1904). *Adolescence: Its psychology and its relations to physiology, anthropology, sociology, sex, crime, religion, and education* (Vor. 1 & 2). New York: Appleton.
- Hammond, S. (2000). Using psychometric tests. In G. M. Breakwell, S. Hammond, & C. Fife-Schaw (Eds.), *Research methods in psychology* (pp. 175-193). London, UK: Sage Publications.

- Harter, S. (1982). The perceived competence scale for children. *Child Development*, 53, 87-97.
- Harter, S. (1985). *Manual for the self-perception profile for children*. Denver, CO: University of Denver.
- Haslam, S. A. (2004). *Psychology in organizations: The social identity approach* (2nd ed.). Thousand Oaks, CA: Sage Publications.
- Havighurst, R. J. (1972). *Developmental tasks and education* (3rd ed.). New York: David McKay.
- Hayhoe, C. R., & Wilhelm, M. S. (1998). Modeling perceived economic well-being in a family setting: A gender perspective. *Financial Counselling and Planning*, 9, 21-35.
- Hilgert, M. A., Hogart, J. M., & Beverly, S. G. (2003). Household financial management: The connection between knowledge and behavior. *Federal Reserve Bulletin*, 89, 309-322.
- Hill, J. P. (1987). Research on adolescents and their families: Past and prospect. *New Directions for Child Development*, 37, 13-31.
- Hill, J. P., & Holmbeck, G. N. (1986). Attachment and autonomy during adolescence. In G. J. Whitehurst (Ed.), *Annals of child development* (Vol. 3, pp. 145-189). Greenwich, CT: JAI.
- Hill, J.P. (1980). *Understanding early adolescence: A framework*. Chapel Hill: University of North Carolina at Chapel Hill, Center for Early Adolescence.
- Hira, T. K. (1997). Financial attitudes, beliefs and behaviours: differences by age. *Journal of Consumer Studies and Home Economics*, 21, 271-290.
- Ho, T., Lim, N., & Camerer, C. (2006). Modeling the psychology of consumer and firm behavior with behavioral economics. *Journal of Marketing Research*, 43, 307-331.
- Hollister, J., Rapp, D., & Goldsmith, E. (1986). Monetary practices of sixth-grade students. *Child Study Journal*, 16, 183-190.
- Holmbeck, G. N., Paikoff, R. L., & Brooks-Gunn, J. (1996). Parenting adolescents. In M. H. Bornstein (Ed.), *Handbook of Parenting, Vol 1: Children and Parenting* (pp. 91-118). Hove, UK: Laurence Erlbaum Associates.
- Horioka, C. Y., Watanabe, W. (1997). Why do people save? A micro-analysis of motives for household saving in Japan. *The Economic Journal*, 107, 537-552.
- Hough, L. M., & Ones, D. S. (2001). The structure, measurement, validity, and use of personality variables in industrial, work, and organizational psychology. In N. Anderson, D. S. Ones, H. Sinangil, & C. Viswesvaran (Eds.), *Handbook of industrial, work, and organizational psychology* (Vol. 1, pp. 233-277). London, UK: Sage.
- Howell, C. J., Howell, R. T., & Schwabe, K. A. (2006). Does wealth enhance life-satisfaction for people who are materially deprived? Exploring the association among the Orang Asli of peninsular Malaysia. *Social Indicators Research*, 76, 499-524.
- Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, 6, 1-55.
- Husman, J., & Lens, W. (1999). The role of the future in student motivation. *Educational Psychologist*, 34, 113-125.
- Hussain, M., & Brookins, O. T. (2001). On the determinants of National Saving: An extreme-bounds analysis. *Weltwirtschaftliches Archiv*, 137, 150-174.

- Inhelder, B., & Piaget, J. (1958). *The growth of logical thinking from childhood to adolescence: An essay on the construction of formal operational structures*. Oxford, UK: Basic Books.
- Inkeles, A. (1969). Social structure and socialisation. In D. A. Goslin (Ed.), *Handbook of socialization theory and research* (pp.615-632). USA: Rand McNally & Company.
- International Personality Item Pool (2001). *A scientific collaboratory for the development of advanced measures of personality traits and other individual differences* (<http://ipip.ori.org/>). Internet Web Site.
- Jacoby, J. (1976). Consumer and industrial psychology: prospects for theory corroboration and mutual contribution. In M. D. Dunnette (Ed.), *Handbook of industrial and organizational psychology*. Chicago, IL: Rand McNally.
- Jahoda, C. (1979). The construction of economic reality by some Glaswegian children. *European Journal of Social Psychology*, 9, 115-127.
- Jahoda, G. (1981). The development of thinking about economic institutions: The bank. *Cahiers de Psychologie Cognitive*, 1, 55-78.
- Jones, G., O'Sullivan, A., & Rouse, J. (2006). Young adults, partners and parents: Individual agency and the problems of support. *Journal of Youth Studies*, 9, 375-392.
- Joo, S. (2008). Personal financial wellness. In J. J. Xiao (Ed.), *Handbook of consumer finance research* (pp. 21-33). New York, NY, US: Springer Science + Business Media.
- Julander, C.-R. (1975). *Sparande och effekter av ökad kunskap om inkomstens användning* [Saving behaviour and the effects of increased knowledge of income use]. Unpublished doctoral dissertation. The Stockholm School of Economics: Stockholm, Sweden.
- Jundin, S. (1988). Ungdomars konsumtion och sparande [Youth Consumption and Saving]. In K.-E. Wärnderyd, S. Jundin, & R. Wahlund (Eds.), *Sparbeteende och sparattityder* [Saving behavior and saving attitudes]. Stockholm: Allmänna Förlaget, 77-114.
- Juster, F. T. (1986). What do we know about saving behaviour? *Economic Outlook USA*, 13, 17-19.
- Kahneman, D., & Tversky, A. (1979). Prospect theory: An analysis of decision under risk. *Econometrica* 47, 263-292.
- Kapteyn, A. (2000). *Saving and reference groups*. Mimeo. Tilburg University.
- Katona, G. (1975). *Psychological economics*. New York: Elsevier.
- Kazarosian, M. (1997). Precautionary savings - A panel study. *The Review of Economics and Statistics*, 79, 241-247.
- Keating, D. P. (1980). Thinking processes in adolescence. In J. Adelson (Ed.), *Handbook of adolescent psychology* (pp. 211-246). New York: Wiley.
- Keating, D. P. (1990). Adolescent thinking. In S. S. Feldman, & G. R. Elliott (Eds.), *At the threshold: The developing adolescent* (pp. 54-89). Cambridge, MA: Harvard University Press.
- Keating, D. P., & Sasse, D. K. (1996). Cognitive socialization in adolescence: Critical period for a critical habit of mind. In G. R. Adams, R. Montemayor, & T. P. Gullota (Eds.), *Psychosocial development during adolescence* (pp. 232-258), Thousand Oaks, CA: Sage.
- Keating, D.P. (2004) Cognitive and brain development. In R. J. Lerner, & Steinberg, L. D. (Eds.), *Handbook of Adolescent Psychology* (2nd ed, pp. 45-84). New York: Wiley.

- Kempson, E., Bryson, A., & Rowlingson, K. (1994). *Hard times? How poor families make ends meet*. London: Policy Studies Institute.
- Keynes, J. M. (1936). *The general theory of employment, interest and money*. London: Macmillan Press Ltd.
- King, M. (1985). The economics of saving: A survey of recent contributions. In K. J. Arrow, & S. Honkapohja (Eds.), *Frontiers of Economics* (pp. 227-294). Oxford: Basil Blackwell Ltd.
- Kirchler, E. (1995). Studying economic decisions within private households: A critical review and design for a „couple experiences diary“. *Journal of Economic Psychology*, *16*, 393-419.
- Klineberg, S. L. (1967). Changes in outlook on the future between childhood and adolescence. *Journal of Personality and Social Psychology*, *7*, 185-193.
- Knowles, J., & Postlewaite, A. (2005). *Do children learn to save from their parents?* Unpublished mimeo.
- Kochanska, G. (1997). Multiple pathways to conscience for children with different temperaments: From toddlerhood to age 5. *Developmental Psychology*, *33*, 228-240.
- Kooreman, P. (2007). Time, money, peers, and parents: Some data and theories on teenage behavior. *Journal of Population Economics*, *20*, 9-33.
- Kotlikoff, L. J. (1988). Intergenerational transfers and savings. *Journal of Economic Perspectives*, *2*, 41-58.
- Kotlikoff, L. J. (1989). *What determines savings?* Cambridge, MA: The MIT Press.
- Krause, K., & Harbaugh, W. T. (1999). *Economic experiments that you can perform at home on your children*. Working paper.
- Kuhn, D., & Franklin, S. (2006). The second decade: What develops (and how)? In W. Damon, R. Lerner, D. Kuhn, & R. Siegler (Eds.), *Handbook of child psychology, Vol. 2: Cognition, perception and language* (6th ed., pp. 953-993). New York: John Wiley & Sons.
- Kurdek, L. A., Fine, M. A., & Sinclair, R. J. (1995). School adjustment in sixth graders: Parenting transitions, family climate, and peer norm effects. *Child Development*, *66*, 430-445.
- Lamborn, S. D., & Felbab, A. J. (2003). Applying ethnic equivalence and cultural values models to African-American teens' perceptions of parents. *Journal of Adolescence*, *26*, 601-618.
- Lamborn, S., Mounts, N., Steinberg, L., & Dornbusch, S. M. (1991). Patterns of competence and adjustment from authoritative, authoritarian, indulgent, and neglectful families. *Child Development*, *62*, 1049-1065.
- Larson, R., & Wilson, S. (2004). Adolescence across place and time: Globalization and the changing pathways to adulthood. In R. M. Lerner, & L. Steinberg (Eds.), *Handbook of adolescent psychology* (2nd ed., pp. 299-361). Hoboken, NJ, US: John Wiley & Sons.
- Lassarre, D., & Roland-Lévy, C. (1989). Understanding children's economic socialization. In K. G. Grünert, & F. Ölander (Eds.), *Understanding economic behaviour* (pp. 347-368). Dordrecht, NL: Kluwer Academic Publishers.
- Lassarre, D. (1996). Consumer education in French families and schools. In P. Lunt, & A. Furnham (Eds.), *Economic socialization: The economic beliefs and behaviours of young people* (pp. 130-148). Cheltenham, UK: Edward Elgar.
- Le Vine, R. A. (1974). Parental goals: A cross-cultural view. *Teachers College Record*, *76*, 226-239.

- Lea, S. E. G., & Webley, P. (1995). Psychological factors in consumer debt: Money management, economic socialization, and credit use. *Journal of Economic Psychology, 16*, 681-701.
- Lea, S. E. G., Tarcy, R. M., & Webley, P. (1987). *The individual in the economy: A textbook of economic psychology*. Cambridge, UK: Cambridge University Press.
- Lea, S. E. G., Webley, P., & Levine, R. M. (1993). The economic psychology of consumer debt. *Journal of Economic Psychology, 14*, 85-119.
- Lea, S. E. G., Webley, P., & Walker, C. M. (1995). Psychological factors in consumer debt: Money management, economic socialization, and credit use. *Journal of Economic Psychology, 16*, 681-701.
- Lea, S., Unrath, A., de Wilde, C., & Wynia, J. (1999). Money management in young adults. *Proceedings of the 24 International Symposium on Economic Psychology, Austria*, 336-344.
- Lehnard, J., & Neyer, F. J. (2006). Should I stay or should I go? Attachment and personality in stable and instable romantic relationships. *European Journal of Personality, 20*, 475-495.
- Leiser, D. (1983). Children's conceptions of economics – The constitution of a cognitive domain. *Journal of Economic Psychology, 4*, 297-317.
- Leiser, D., & Ganin, M. (1996). Economic participation and economic socialization. In P. Lunt, & A. Furnham (Eds.), *Economic socialization: The economic beliefs and behaviours of young people* (pp. 93-109). Cheltenham, UK: Edward Elgar.
- Leiser, D., Azar, O. H., & Hadar, L. (2008). Psychological construal of economic behavior. *Journal of Economic Psychology, 29*, 762-776.
- Leiser, D., Sévon, G., & Levy, D. (1990). Children's economic socialization: Summarizing the cross-cultural comparison of ten countries. *Journal of Economic Psychology, 11*, 591-631.
- Leman, P. J. (2005). Authority and moral reasons: Parenting style and children's perceptions of adult rule justifications. *International Journal of Behavioral Development, 4*, 265-270.
- Lerner, R. M. (1986). *Concepts and theories of human development* (2nd ed.). New York: Random House.
- Lerner, R. M. (1998). Theories of human development: Contemporary perspectives. In W. Damon (Ed.), *Handbook of child psychology, Vol 1: Theoretical models of human development* (5th ed., pp. 1-24). New York: Wiley.
- Lerner, R. M. (2002). *Concepts and theories of human development* (3rd ed.). Mahwah, NJ: Erlbaum.
- Lerner, R. M., & Steinberg, L. (2004). The scientific study of adolescent development: Past, present, and future. In R. M. Lerner, & L. Steinberg (Eds.), *Handbook of adolescent development* (pp. 1-12). Hoboken, NJ: John Wiley & Sons.
- Lerner, R. M., & Walls, T. (1999). Revisiting individuals as producers of their development: From dynamic interactionism to developmental systems. In J. Brandstätter, & R. M. Lerner (Eds.), *Action and self-development: Theory and research through the life span* (pp. 3-36). Thousand Oaks, CA, US: Sage.
- Lerner, R. M., Ree Noh, E., & Wilson, C. (1998). The parenting of adolescents and adolescents as parents: A developmental contextual perspective. In J. C. Westman (Ed.), & P. C. Gorman, *Parenthood in America*. Proceedings of the conference held in Madison, Wisconsin April 19-21, University of Wisconsin-Madison General Library System.
- Lessing, E. E. (1968). Demographic, developmental, and personality correlates of length of future time perspective. *Journal of Personality, 36*, 183-201.

- Lewin, K. (1935). *A dynamic theory of personality*. New York: McGraw-Hill.
- Lewin, K. (1951). *Field theory in social science*. New York: Harper & Row.
- Lewis, A., & Scott, A. (2000). The economic awareness, knowledge and pocket money practices of a sample of UK adolescents: A study of economic socialization and economic psychology. *Children's Social and Economics Education, 4*, 34-46.
- Lewis, A., & Scott, A. (2003). A study of economic socialization: Financial practices in the home and the preferred role of schools among parents with children under 16. *Citizenship, Social and Economics Education, 5*, 138-147.
- Lightsey, O. R., (1996). What leads to wellness? The role of psychological resources in well-being. *Counseling Psychologist, 24*, 589-759.
- Lindqvist, A. (1981). Hushållens sparande (The Saving Behaviour of Households). Stockholm: Doctoral dissertation, The Stockholm School of Economics. In K.-E. Wärneryd, *The Psychology of Saving. A Study on Economic Psychology*. Cheltenham, UK: Edward Elgar.
- Lintonen, T. P., Wilska, T.-A., Koivusilta, L. K., & Konu, A. I. (2007). Trends in disposable income among teenage boys and girls in Finland from 1977 to 2003. *International Journal of Consumer Studies, 31*, 340-348.
- Litovsky, V. G., & Dusek, J. B. (1985). Perceptions of child rearing and self-concept development during the early adolescent years. *Journal of Youth and Adolescence, 14*, 373-387.
- Loehlin, J. C., & Nichols, R. (1976). *Heredity, environment, and personality: A Study of 850 sets of twins*. Austin, TX: University of Texas Press.
- Loewenstein, G. (2000). Willpower: A decision-theorist's perspective. *Law and Philosophy, 19*, 51-76.
- Logue, A. W. (1995). *Der Lohn des Wartens: Über die Psychologie der Geduld*. Heidelberg: Spektrum Akademischer Verlag.
- Lunt, P. K., & Livingstone, S. M. (1991). Psychological, social and economic determinants of saving: Comparing recurrent and total savings. *Journal of Economic Psychology, 12*, 621-641.
- Lunt, P., & Furnham, A. (1996). *Economic socialization: The economic beliefs and behaviours of young people*. Cheltenham, UK: Edward Elgar.
- Lutfey, K., & Mortimer, J. T. (2006). Development and Socialization through the Adult Life Course. In J. Delamater (Ed.), *Handbook of Social Psychology* (pp. 183-202). New York: Springer.
- Lytton, H. (1990). Child and parent effects in boys' conduct disorder: A re-interpretation. *Developmental Psychology, 26*, 683-697.
- Lytton, H. (2000). Toward a model of family-environmental and child-biological influences on development. *Developmental Review, 20*, 150-179.
- MacCallum, R.C., Browne, M. W., & Sugawara, H. M. (1996). Power analysis and determination of sample size for covariate structure modeling. *Psychological Methods, 1*, 130-149.
- Maccoby, E. E. (2000). Parenting and its effects on children: On reading and misreading behavior genetics. *Annual Review of Psychology, 51*, 1-27.
- Maccoby, E. E., & Martin, J. A. (1983). Socialization in the context of the family: Parent-child interaction. In P. H. Mussen (Series Ed.) & E. M. Hetherington (Vol. Ed.), *Handbook of child psychology: Vol. 4. Socialization, personality, and social development* (4th ed., pp. 1 -101). New York: Wiley.
- MacDonald, A. P. (1971). Internal-external locus of control: Parental antecedents. *Journal of Consulting and Clinical Psychology, 37*, 141-147.

- Madigan, A. L. (2005). Interparental conflict, children's self-control, and the mediating role of parenting. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 66 (2-B), 1199.
- Madrian, B. C., & Shea, D. F. (2001). The power of suggestion: Inertia in 401(k) participation and savings behavior. *Quarterly Journal of Economics*, 116, 256-262).
- Magnusson, D., & Stattin, H. (2006). The person in context: A holistic-interactionistic approach. In R. M. Lerner (Ed.), *Handbook of child psychology, Vol 1: Theoretical models of human development* (pp. 400-464). Hoboken, NJ: John Wiley & Sons.
- Maital, S. (1982). *Minds, markets and money*. New York: Basic Books.
- Mangleburg, T. F., & Brown, J. J. (1995). Teens' sources of income: jobs and allowances. *Journal of Marketing Theory and Practice*, 3, 33-47.
- Marshall, A. (1966). *Principles of economics: an introductory volume*. London: Macmillan.
- Marshall, H., & Magruder, L. (1960). Relations between parent money education practices and children's knowledge and use of money. *Child Development*, 31, 253-84.
- Mason, M. (1999). A review of procedural and statistical methods for handling attrition and missing data in clinical research. *Measurement and Evaluation in Counseling and Development*, 32, 111-118.
- Mauro, C. F., & Harris, Y. R. (2000). The influence of maternal child-rearing attitudes and teaching behaviors on preschoolers' delay of gratification. *Journal of Genetic Psychology*, 161, 292-306.
- McCabe, P. C. & Marshall, D. J. (2006). Measuring the social competence of preschool children with specific language impairment: Correspondence among informant ratings and behavioral observations. *Topics in Early Childhood Special Education*, 26, 234-246.
- McCandless, B. R. (1961). *Children and adolescents*. New York: Holt, Rinehart, & Winston.
- McCandless, B. R. (1970). *Adolescents*. Hinsdale, IL: Dryden Press.
- Mead, M. (1958). Cultural determinants of behavior. In G. Simpson, & A. Roe (Eds.), *Behaviour and evolution* (pp. 480-503). New Haven: Yale University Press.
- Mead, M. (1978). The relationship between research by women and women's experiential roles. *Psychology of Women Quarterly*, 2, 363-365.
- Meier, K., Kirchler, E., & Hubert, A.-C. (1999). Savings and investment decisions within private households: Spouses' dominance in decisions on various forms of investment. *Journal of Economic Psychology*, 20, 499-519.
- Metcalfe, J., & Mischel, W. (1999). A hot/cool-system analysis of delay of gratification: Dynamics of willpower. *Psychological Review*, 106, 3-19.
- Mewse, A. J., Eiser, J. R., Slater, A. M., & Lea, S. E. G. (2004). The smoking behaviors of adolescents and their friends: Do parents matter? *Parenting: Science and Practice*, 4, 51-72.
- Meyer, D. J. C., & Anderson, H. C. (2000). Preadolescents and apparel purchasing: Conformity to parents and peers in the consumer socialization process. *Journal of Social Behavior and Personality*, 15, 243-257.
- Miller, J., & Yung, S. (1990). The role of allowances in adolescent socialization. *Youth and Society*, 22, 137-159.
- Miller, S. A. (1998). *Developmental research methods*. New Jersey: Prentice-Hall.

- Mischel, H. N., & Mischel, W. (1983). The development of children's knowledge of self-control strategies. *Child Development*, *54*, 603-619.
- Mischel, W. (1961). Father-absence and delay of gratification: Cross-cultural comparisons. *Journal of Abnormal and Social Psychology*, *56*, 57-61.
- Mischel, W. (1974). Processes in delay of gratification. In W. Mischel, & L. Berkowitz (Eds.), *Advances in experimental social psychology* (pp. 249-292). New York: Academic Press.
- Modigliani, F., & Brumberg, R. (1954). Utility analysis and the consumption function. An interpretation of cross-section data. In K. K. Kurihara (Ed.), *Post-Keynesian Economics* (pp. 388-438). New Brunswick, NJ: Rutgers University Press, 388-438.
- Moneyminded (2007). *Youth debt – a rising issue*. Retrieved September 21, 2007, from <http://www.moneyminded.com.au/features/default.asp?type=BackToSchool>
- Morris, M. A. (2003). The role of parenting style and the family characteristics of levels of organization and control in the development of self-regulation skills in young children. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, *64* (6-B), 2960.
- Mortimer, J., Dennehy, K., Lee, C., & Finch, M. (1994). Economic socialization in the American family: The prevalence, distribution and consequences of allowance arrangements. *Family Relations*, *43*, 23-29.
- Moschis, G. P., & Churchill, G. A., Jr. (1978). Consumer socialization: A theoretical and empirical analysis. *Journal of Marketing Research*, *15*, 599-609.
- Moscovici, S. (1984). The phenomenon of social representations. In R. M. Farr & S. Moscovici (Eds.), *Social representations* (pp. 3-69). Cambridge, UK: Cambridge University Press.
- Moskowitz, D. S., & Schwarz, J. C. (1982). A validity comparison of behaviour counts and ratings by knowledgeable informants. *Journal of Personality and Social Psychology*, *42*, 518-528.
- Moshman, D. (2005). *Adolescent psychological development: Rationality, morality, and identity* (2nd ed.). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.
- Mullainathan, S., & Thaler, R. H. (2004). Behavioral economics. *International Encyclopedia of the Social and Behavioral Sciences* (pp. 1094-1100).
- Murray, T. R. (1985). *Comparing theories of child development*. Belmont, CA: Wadsworth.
- Muthén, L. K., & Muthén, B. O. (1998-2007). *Mplus User's Guide* (4th ed.). Los Angeles, CA: Muthén & Muthén.
- Muuss, R. E. (1996). *Theories of adolescence*. London: The McGraw-Hill Companies.
- National Statistics (2007). Retrieved September 2, 2007, from <http://www.statistics.gov.uk/STATBASE/ssdataset.asp?vlnk=7738>
- Newson, J., & Newson, E. (1976). *Seven-year-olds in the home environment*. New York: Wiley.
- Ng, S. H. (1983). Children's ideas about the bank and shop profit: Developmental stages and the influence of cognitive contrasts and conflict. *Journal of Economic Psychology*, *4*, 209-221.
- Ng, S.H. (1985). Children's ideas about the bank: A New Zealand replication. *European Journal of Social Psychology*, *15*, 121-123.
- Nielsen, L. (1999). College aged students with divorced parents: Facts and fiction. *College Student Journal*, *33*, 543-573.

- Nijhof, K. S., & Engels, R. C. M. E. (2007). Parenting styles, coping strategies, and the expression of homesickness. *Journal of Adolescence*, *30*, 709-720.
- Norvilitis, J. M., Merwin, M. M., Osberg, T. M., Roehling, P. V., Young, P., & Kamas, M. M. (2006). Personality factors, money attitudes, financial knowledge, and credit-card debt in college students. *Journal of Applied Social Psychology*, *36*, 1395-1413.
- Nurmi, J.-E., & Pulliainen, H. (1991). The changing parent-child relationship, self-esteem, and intelligence as determinants of orientation to the future during early adolescence. *Journal of Adolescence*, *14*, 35-51.
- Nurmi, J.-E. (1987). Age, sex, social class, and quality of family interaction as determinants of adolescents' future orientation: A developmental task interpretation. *Adolescence*, *22*, 977-991.
- Nurmi, J.-E. (2004). Socialization and self-development: Channeling, selection, adjustment, and reflection. In R. Lerner & L. Steinberg (Eds.), *Handbook of adolescent psychology* (2nd ed., pp. 85-124). Hoboken, NJ: John Wiley & Sons.
- Nyhus, E. K. (2002). Psychological determinants of household saving behaviour. Bergen: Norges Handelshøyskole.
- Nyhus, E. K., & Webley, P. (2001). The role of personality in household saving and borrowing behaviour. *European Journal of Personality*, *15*, 85-103.
- Nyhus, E. K., & Webley, P. (2005). The inter-generational transmission of future orientation and saving preferences. *IAREP Conference proceedings*, Prague, CZE.
- O'Donoghue, T., & Rabin, M. (2000). The economics of immediate gratification. *Journal of Behavioral Decision Making*, *13*, 233-250.
- O'Connor, T. G., Deater-Deckard, K., Fulker, D., Rutter, M. L., & Plomin, R. (1998). Genotype-environment correlations in late childhood and early adolescence: Antisocial behavioral problems and coercive parenting. *Developmental Psychology*, *34*, 970-981.
- Oerter, R., & Montada, L. (Eds.). (2008). *Entwicklungspsychologie. Ein Lehrbuch* (6th ed.). Weinheim: Beltz PVU.
- Okagaki, L., & Bingham, G. E. (2005). Parents' social cognitions and their parenting behaviours. In T. Luster, & L. Okagaki (Eds.), *Parenting: An ecological perspective* (2nd ed., pp. 3-33). Mahwah, NJ: Erlbaum.
- Ölander, F., & Seipel, C. M. (1970). *Psychological approaches to the study of saving*. Studies in Consumer Savings, No. 7, Urbana-Champaign, IL: The Bureau of Economic and Business Research, University of Illinois.
- Olivas, M. A. (1986). Financial aid and self-reports by disadvantaged students: The importance of being earnest. *Research in Higher Education*, *25*, 245-252.
- Oppenheim, A. N. (1992). *Questionnaire design, interviewing and attitude measurement*. London: Pinter.
- Orna-Ornstein, J. (1997). *The story of money*. London: British Museum Press.
- Orr, D. P., Brack, C. J., & Ingersoll, G. (1988). Pubertal maturation and cognitive maturity in adolescents. *Journal of Adolescent Health Care*, *9*, 273-279.
- Otto, A. M. C., Schots, P. A. M., Westerman, J. A. J., & Webley, P. (2006). Children's use of saving strategies: An experimental approach. *Journal of Economic Psychology*, *27*, 57-72.
- Pahl, J. (1995). His money, her money: Recent research on financial organization in marriage. *Journal of Economic Psychology*, *16*, 361-376.
- Patock-Peckham, J. A., Cheong, J., Balhorn, M. E., & Nagoshi, C. T. (2001). A social learning perspective: A model of parenting styles, self-regulation,

- perceived drinking control, and alcohol use and problems. *Alcoholism: Clinical and Experimental Research*, 25, 1284–1292.
- Peabody, D., & De Raad, B. (2002). The substantive nature of psycholexical personality factors: A comparison across languages. *Journal of Personality and Social Psychology*, 83, 983-997.
- Pechman, C., Levine, L., Loughlin, S., & Leslie, F. (2005). Impulsive and self-conscious: Adolescents' vulnerability to advertising and promotion. *Journal of Public Policy & Marketing*, 24, 202-221.
- Pelegrina, S., García-Linares, M. C., & Casanova, P. F. (2003). Adolescents and their parents' perceptions about parenting characteristics. Who can better predict the adolescent's academic competence? *Journal of Adolescence*, 26, 651-665.
- Petersen, A. C. (1988). Adolescent development. In M. R. Rosenzweig (Ed.), *Annual Review of Psychology*, 39, 583-607.
- Petrocelli, J. V. (2003). Factor validation of the consideration of future consequences scale: Evidence for a short version. *Journal of Social Psychology*, 143, 405-413.
- Pfeg (July 4, 2007). Pfeg welcomes new government appointment [Press statement]. Retrieved September 24, 2007 from <http://www.pfeg.org/documents/media/pfeg%20press%20statement%204.7.07.doc>
- Piaget, J. (1960). *The child's conception of the world*. Paterson, NJ: Littlefield, Adams.
- Piaget, J. (1969). The intellectual development of the adolescent. In G. Caplan, & S. Lebovici (Eds.), *Adolescence: Psychosocial perspective* (pp. 22-26). New York: Basic Books.
- Piaget, J. (1970). Piaget's theory. In P. H. Mussen (Ed.), *Carmichael's manual of child psychology* (Vol. 1). New York: Wiley.
- Piaget, J. (1972). Intellectual evolution from adolescence to adulthood. *Human Development*, 15, 1-12.
- Pickvance, C. G., & Pickvance, K. (1995). The role of family help in the housing decisions of young-people. *Sociological Review*, 43, 123-149.
- Pliner, P., Freedman, J., Abramovitch, R., & Drake, P. (1996). Children as consumers: In the laboratory and beyond. In P. Lunt, & A. Furnham (Eds.), *Economic socialization* (pp. 35-46). Cheltenham: Edward Elgar.
- Plomin, R. (1990). *Nature and nurture: An introduction to human behavioral genetics*. Pacific Grove, CA: Brooks/Cole.
- Plomin, R., DeFries, J. C., McClearn, G. E., & Rutter, M. (1997). *Behavioural genetics* (3rd ed.). New York: W. H. Freeman.
- Pratt, M. W., Danso, H. A., Arnold, M. L., Norris, J. E., & Filyer, R. (2001). Adult generativity and the socialization of adolescents: Relations to mothers' and fathers' parenting beliefs, styles, and practices. *Journal of Personality*, 69, 89-120.
- Prevey, E. E. (1945). A quantitative study of family practices in training children in the use of money. *The Journal of Educational Psychology*, 36, 411-428.
- Pritchard, M. E., Myers, B. K., & Cassidy, D. J. (1989). Factors associated with adolescent saving and spending patterns. *Adolescence*, 24, 711-723.
- Pulkkinen, L. (1990). Home atmosphere and adolescent future orientation. *European Journal of Psychology of Education*, 5, 33-43.
- Purdie, N., Carroll, A., & Roche, L. (2004). Parenting and adolescent self-regulation. *Journal of Adolescence*, 27, 663-676.

- Rabinovich, A., & Webley, P. (2007). Filling the gap between planning and doing: Psychological factors involved in the successful implementation of saving intention. *Journal of Economic Psychology*, 28, 444-461.
- Radner, D. B. (1983). Adjusted Estimates of the Size Distribution of Family Money Income. *Journal of Business & Economic Statistics*, 1, 136-146.
- Rainer (2008). Why do young people pay more? London: YouGov survey, Rainer, 2008. Retrieved on 11 November, 2008, from <http://www.catch-22.org.uk/index.asp?m=242>.
- Rayalu, T. R. (1991). Areas of conflict between parents and their teenage children. *Indian Journal of Behaviour*, 15, 2, 21-29.
- RBS (2008). MoneySense Research Panel Report, March 2008. Edinburgh: The Royal Bank of Scotland Group. Retrieved on 11 November, 2008, from http://www.moneysensepanel.co.uk/Moneysense_Panel_research_2007_final.pdf
- Reis, H. T., & Judd, C. M. (Eds.). (2000). *Handbook of research methods in social and personality psychology*. Cambridge, UK: Cambridge University Press.
- Reitman, D., & Gross, A. M. (1997). The relation of maternal child-rearing attitudes to delay of gratification among boys. *Child Study Journal*, 27, 279-300.
- Rippl, S., & Boehnke, K. (1995). Authoritarianism: Adolescents from East and West Germany and the United States compared. In J. Youniss, (Ed.), *After the wall: Family adaptations in East and West Germany* (pp. 57-70). San Francisco, CA: Jossey-Bass.
- Robbins, L. (1932). *An Essay on the Nature and Significance of Economic Science*. London: Macmillan.
- Roberts, B. W., Chernyshenko, O. S., Stark, S., & Goldberg, L. R. (2005). The structure of conscientiousness: An empirical investigation based on seven major personality questionnaires. *Personnel Psychology*, 58, 103-139.
- Rodrigo, M.-J., García, M., Máiquez, M.-L., & Triana, B. (2005). Discrepancies between parents and adolescent children in the perceived frequency and emotional intensity in family conflicts. *Estudios de Psicología*, 26, 21-34.
- Roland-Lévy, C. (1995). A classification of people's financial behaviour. *IAREP Conference proceedings*, Bergen, NOR.
- Roland-Lévy, C. (1999). Economic socialization. In P. E. Earl, & S. Kemp (Eds.), *The elgar companion to consumer research and economic psychology* (pp. 175-181). Cheltenham, UK: Edward Elgar.
- Roland-Lévy, C., & Hervé, S. (1999). Differences in spending and in social representations of parental financial support when money is given or earned. *IAREP Conference proceedings*, Belgirate, ITA.
- Romal, J. B., & Kaplan, B. J. (1995). Difference in self-control among spenders and savers. *Psychology: A Journal of Human Behavior*, 32, 8-17.
- Rose, R. J. (2007). Peers, parents, and processes of adolescent socialization: A twin-study perspective. In R. C. M. E. Engels, M. Kerr, & H. Stattin (Eds.), *Friends, lovers and groups: Key relationships in adolescence* (pp. 105-124). New York: John Wiley & Sons.
- Rotter, J. B. (1966). Generalized expectancies for internal versus external control of reinforcement. *Psychological Monographs: General & Applied*, 80, 1-28.
- Rudy, D., & Grusec, J. E. (2001). Correlates of authoritarian parenting in individualist and collectivist cultures and implications for understanding the transmission of values. *Journal of Cross-Cultural Psychology*, 32, 202-212.

- Ryan, R. M. (1993). Agency and organization: Intrinsic motivation, autonomy and the self in psychological development. In J. Jacobs (Ed.), *Nebraska symposium on motivation* (Vol. 40, pp. 1-56). Lincoln: University of Nebraska Press.
- Schaffer, H.R. (1999). Understanding socialization: from unidirectional to bidirectional conceptions. In M. Bennett (Ed.), *Developmental psychology: Achievements and prospects* (pp. 273-286). Philadelphia: Psychology Press.
- Schmölders, G. (1966). *Psychologie des Geldes* [The psychology of money]. Reinbeck bei Hamburg, Germany: Rowolt.
- Schneewind, K. A., Schröder, G., & Cattell, R. B. (1983). *Der 16-Persönlichkeits-Faktoren-Test 16PF* [The 16-Personality-Factor-Test. 16PF]. Bern: Huber.
- Schneider, J. (2000). The increasing financial dependency of young people on their parents. *Journal of Youth Studies*, 3, 5-20.
- Schor, J. B. (1998). *The overspent American*. New York: Basic Books.
- Schröder, M. J. A., & McKinnon, S. (2007). Learning good judgement: Young Europeans' perceptions of key consumer skills. *International Journal of Consumer Studies*, 31, 152-159.
- Scott, J. (2000). Children as respondents: The challenge for quantitative methods. In P. M. Christensen, & A. James (Eds.), *Research with children: Perspectives and practices* (pp. 98-119). London: Falmer Press.
- Seginer, R., & Schlesinger, R. (1998). Adolescents' future orientation in time and place: The case of the Israeli Kibbutz. *International Journal of Behavioral Development*, 22, 151-167.
- Seginer, R., Vermulst, A., & Shoyer, S. (2004). The indirect link between perceived parenting and adolescent future orientation: A multiple-step model. *International Journal of Behavioral Development*, 28, 365-378.
- Seiffge-Krenke, I. (2007). Changes in close relationships during the transition to adulthood and their impact on adaptation: Longitudinal approaches: Introduction to the special issue. *International Journal of Behavioral Development*, 31, 537-538.
- Shanahan, M. J. (2000). Pathways to adulthood in changing societies: Variability and mechanisms in life course perspective. *Annual Review of Sociology*, 26, 667-692.
- Shanahan, M. J., & Elder, G. H. Jr. (2002). History, agency, and the life course. In L. J. Crockett (Ed.), *Agency, motivation, and the life course* (pp. 145-186). Lincoln, NE, US: University of Nebraska Press.
- Shannon, L. (1975). Development of time perspective in three cultural groups: A cultural difference or an expectancy interpretation. *Developmental Psychology*, 11, 114-115.
- Shefrin, H. M., & Thaler, R. H. (1988). The Behavioural Life-Cycle Hypothesis. *Economic Inquiry*, 26, 609-603.
- Shefrin, H. M., & Thaler, R. H. (1992). Mental accounting, saving, and self-control. In G. Loewenstein, & J. Elster (Eds.), *Choice over time* (pp.287-330). New York: Russell Sage Foundation.
- Silk, J. S., Morris, A. S., Kanaya, T., & Steinberg, L. (2003). Psychological control and autonomy granting: Opposite ends of a continuum or distinct constructs? *Journal of Research on Adolescence*, 13, 113-128.
- Sonuga-Barke, E. J. S., & Webley, P. (1993). *Children's saving: A study in the development of economic behaviour*. Hillsdale, NJ: Lawrence Erlbaum.
- Soward, K. W. (2006). Resilience and self-control in at-risk preschool children: Influences of maternal parenting style and self-control. *Dissertation Abstracts International: Section B: The Sciences and Engineering*, 67 (2-B), 1169.

- Stacey, B. G. (1982). Economic socialization in the pre-adult years. *British Journal of Social Psychology*, *21*, 159-173.
- Stacey, B. G. (1987). Economic socialization. In S. Long (Ed.), *Annual Review of Political Science* (Vol 2, pp. 1-23). Norwood: Ablex Publishing.
- Steinberg, L. (1990). Autonomy, conflict, and harmony in the family relationship. In S. S. Feldman, & G. R. Elliott (Eds.), *At the threshold: The developing adolescent* (pp. 255-277). Cambridge, MA: Harvard University Press.
- Steinberg, L. (1993). *Adolescence* (3rd ed.). New York: McGraw-Hill.
- Steinberg, L. (2001). We know some things: Parent-adolescent relationships in retrospect and prospect. *Journal of Research on Adolescence*, *11*, 1-19.
- Steinberg, L., & Morris, A. S. (2001). Adolescent development. *Annual Review of Psychology*, *52*, 83-110.
- Steinberg, L., & Silverberg, S. B. (1986). The vicissitudes of autonomy in early adolescence. *Child Development*, *57*, 841-851.
- Steinberg, L., Elmen, J., & Mounts, N. (1989). Authoritative parenting, psychosocial maturity, and academic success among adolescents. *Child Development*, *60*, 1424-1436.
- Steinberg, L., Graham, S., O'Brien, L., Woolard, J., Cauffman, E., & Banich, M. (2009). Age differences in future orientation and delay discounting. *Child Development*, *80*, 28-44.
- Steinberg, L., Lamborn, S. D., Dornbusch, S. M., & Darling, N. (1992). Impact of parenting practices on adolescent achievement: Authoritative parenting, school involvement, and encouragement to succeed. *Child Development*, *63*, 1266 – 1281.
- Strage, A., & Brandt, T.S. (1999). Authoritative parenting and college students' academic adjustment and success. *Journal of Educational Psychology*, *91*, 146 – 156.
- Strathman, A., Gleicher, F., Boninger, D. S., & Edwards, C. S. (1994). The consideration of future consequences: Weighing immediate and distant outcomes of behaviour. *Journal of Personality and Social Psychology*, *66*, 742-752.
- Strümpel, B. (1975). Saving behavior in Western Germany and the United States. *American Economic Review*, *65*, 210-216.
- Symonds, P. M. (1940). Economic problems and interests of adolescents. *The School Review*, *48*, 97-107.
- Symonds, P. M. (1936). Life problems and interests of adolescents. *The School Review*, *44*, 506-518.
- Tarde, G. (1902). *La psychologie économique*. Paris: Alcan (2 volumes).
- Tashakkori, A., & Mehryar, A. H. (1982). The differential roles of parents in the family, as reported by a group of Iranian adolescents. *Journal of Marriage and the Family*, *44*, 803-809.
- Tatzel, M. (2002). "Money worlds" and well-being: An integration of money dispositions, materialism and price-related behavior. *Journal of Economic Psychology* *23*, 103–126.
- Thaler, R. H. (1980). Toward a positive theory of consumer choice. *Journal of Economic Behavior and Organization*, *1*, 39-60.
- Thaler, R. H. (1990). Anomalies: saving, fungibility, and mental accounts. *Journal of Economic Perspectives*, *4*, 193-205.
- Thaler, R. H. (1992). *The Winner's Curse: Paradoxes and anomalies of economic life*. New York: The Free Press.

- Thaler, R. H. (1999). Mental accounting matters. *Journal of Behavioral Decision Making*, 12, 183-206.
- Thaler, R. H., & Shefrin, H. M. (1981). An economic theory of self-control. *Journal of Political Economy*, 89, 392-406.
- Todd, Z., Nerlich, B., McKeown, S., & Clarke, D. D. (2004). *Mixing methods in psychology: The integration of qualitative and quantitative methods in theory and practice*. New York: Psychology Press.
- Trommsdorff, G. (1983). Future orientation and socialization. *International Journal of Psychology*, 18, 381-406.
- Tversky, A., & Kahneman, D. (1992). Advances in prospect theory: cumulative representation of uncertainty. *Journal of Risk and Uncertainty*, 5, 297-323.
- Van Raaij, W. F. (1981). Economic psychology. *Journal of Economic Psychology*, 1, 1-24.
- Van Veldhoven, G. M. (1981). Economic psychology: A new discipline? In W. Molt, H. A. Hartmann, & P. Stringer (Eds.), *Advances in economic psychology* (pp. 1-19). Heidelberg: Edition Meyn.
- Wahlund, R., & Wärneryd, K.-E. (1987). Aggregate saving and the saving behaviour of saver groups. *Skandinaviska Enskilda Banken Quarterly Review*, 3, 52-64.
- Walstad, W. (1996). Economic knowledge and the formation of economic opinions and attitudes. In P. Lunt, & A. Furnham (Eds.), *Economic Socialization* (pp. 162-182). Cheltenham: Elgar.
- Ward, S., Wackman, D. B., & Wartella, E. (1977). *How children learn to buy*. London: Sage.
- Warnaar, M. F., & Van Praag, B. (1997). How Dutch teenagers spend their money. *De Economist*, 145, 367-397.
- Wärneryd, K. E. (1991). The psychology of saving: from micro- to macroeconomic psychology. In G. Antonides, W. Arts, & W. F. van Raaij (Eds.), *The consumption of time and the timing of consumption* (pp. 176-194). Amsterdam: North-Holland.
- Wärneryd, K. E. (1996). Personality and Saving. *VSB-CentER Savings Project. Progress Report 39*. CentER for Economic Research, Tilburg University.
- Wärneryd, K.-E. (1988). Social influence on economic behavior. In W. F. van Raaij, G. M. van Veldhoven, & K.-E. Wärneryd (Eds.), *Handbook of economic psychology* (pp. 206-248). Dordrecht: Kluwer Academic Publishers.
- Wärneryd, K.-E. (1999). *The psychology of saving: A study on economic psychology*. Cheltenham, UK: Edward Elgar.
- Warton, P. M., & Goodnow, J. J. (1995). Money and children's household jobs: Parents' views of their interconnections. *International Journal of Behavioral Development*, 18, 335-350.
- Waters, B., & Kennedy, L. (1993). *Every kid: Parenting your five to twelve year old*. Sydney: Doubleday.
- Webley, P., & Plaisier, Z. (1998). The development of mental accounts. *Children's Social and Economic Education*, 3, 55-64.
- Webley, P. (2005). Children's understanding of economics. In M. Barrett, & E. Buchanan-Barrow (Eds.), *Children's understanding of society*. Hove: Psychology Press.
- Webley, P., Burgoyne, C., Lea, S. E. G., & Young, B. (2001). *The economic psychology of everyday life*. Hove, UK: Psychology Press.
- Webley, P., & Lea, S. E. G. (1993). Towards a more realistic psychology of economic socialization. *Journal of Economic Psychology*, 14, 461-472.

- Webley, P., & Nyhus, E. K. (2001). Life-cycle and dispositional routes into problem debt. *British Journal of Psychology*, 92, 423-446.
- Webley, P., & Nyhus, E. K. (2006). Parents' influence on children's future orientation and saving. *Journal of Economic Psychology*, 27, 140-164.
- Webley, P., & Nyhus, E. K. (2008). Inter-temporal choice and self-control: saving and borrowing. In A. Lewis (Ed.), *The Cambridge Handbook of Psychology and Economic Behaviour* (pp. 105-131). Cambridge, UK: Cambridge University Press.
- Webley, P., & Wahlund, R. (1997). Perspectives in economic psychology. *Journal of Economic Psychology*, 18, 153-156.
- Webley, P., & Webley, E. (1990). The Playground Economy. In S. E. G. Lea, P. Webley, & B. M. Young (Eds), *Applied Economic Psychology in the 1990's*. (pp 1082-1087). Exeter: Washington Singer Press.
- Webley, P., Levine, M., & Lewis, A. (1991). A study in economic psychology: Children's saving in a play economy. *Human Relations*, 44, 127-146.
- Weiss, L. H., & Schwarz, C. (1996). The relationship between parenting types and older adolescents' personality, academic achievement, adjustment, and substance use. *Child Development*, 67, 2101-2114.
- West, P., & Sweeting, H. (1996). *Background, Rationale and Design of the West of Scotland 11 to 16 Study*. Working Paper No. 52. MRC Medical Sociology Unit, Glasgow.
- West, P., Sweeting, H., Young, R., & Robins, M. (2006). A material paradox: Socioeconomic status, young people's disposable income and consumer culture. *Journal of Youth Studies*, 9, 437-462.
- Wilkinson, N. (2008). *An introduction to behavioral economics*. Houdmills, Basingstoke, Hampshire: Palgrave Macmillan.
- Willis, P. (1977) *Learning to labour: How working class kids get working class jobs*. London: Saxon House.
- Winsler, A., & Wallace, G., L. (2002). Behavior problems and social skills in preschool children: Parent-teacher agreement and relations with classroom observations. *Early Education and Development*, 13, 41-58.
- Wood, M. (1998). Socio-economic status, delay of gratification, and impulse buying. *Journal of Economic Psychology*, 19, 295-320.
- Xiao, J. J. (2008). Applying theories to financial behavior. In: J. J. Xiao (Ed.), *Handbook of consumer finance research* (pp. 69-82). NY: Springer.
- Youniss, J., & Haynie, D. L. (1992). Friendship in adolescence. *Journal of Developmental and Behavioral Pediatrics*, 13, 59-66.
- Zimbardo, P. G., & Boyd, J. N. (1999). Putting time in perspective: A valid, reliable individual-differences metric. *Journal of Personality and Social Psychology*, 77, 1271-1288.
- Zimmerman, S. L. (1995). *Understanding family policy: Theories and applications* (2nd ed.). Thousand Oaks, CA: Sage.

Appendices

Appendix 1: Questionnaire Pilot Study 1

1. General Information

| | | |
|------|------|--|
| EMCO | 1202 | |
|------|------|--|

- 1 How old are you? years
 2 What gender are you? male female

2. 'Saving-attitudes'

In the table below there are a number of statements about saving (some made by teenagers in Exeter). Please indicate how much you agree or disagree with each statement.

| STATEMENT | Strongly disagree | disagree | Neither agree, nor disagree | agree | Strongly agree |
|--|-------------------|----------|-----------------------------|-------|----------------|
| Saving is easy. | | | | | |
| When I'm tempted to spend the money I want to save, I try to think very hard of the thing I'm saving for. | | | | | |
| I think it's good when parents control your spending. | | | | | |
| I don't save, because I think it's too hard. | | | | | |
| I never tried to save my money. | | | | | |
| I think parents should help you with your money-management. | | | | | |
| I think saving money is not necessary as long as you live at home and your parents support you financially / look after you. | | | | | |
| I have never saved for a desired item. | | | | | |
| I save money, because I don't think my parents should pay for things I don't really need but like. | | | | | |
| I don't manage to save up for something that would imply saving for longer than two weeks. | | | | | |
| I don't manage to save up for something that would imply saving for longer than one month. | | | | | |
| I save by spending a little and regularly putting part of my money aside. | | | | | |
| I save up by not spending at all. | | | | | |
| I don't need to save up for anything because my parents buy me the things I like. | | | | | |
| I don't save money but try to get more money out of my parents. | | | | | |
| I save because saving is a good thing to do. | | | | | |
| I save money because I think one should not spend it unnecessarily. | | | | | |
| I don't save, because it is difficult when you only have a small amount of money anyway. | | | | | |
| I save because it gives me a feeling of security. | | | | | |
| Saving is something you only do when need be. | | | | | |
| I think younger people are not aware of the value of money. | | | | | |
| When I earn money, I spend it more easily. | | | | | |
| Saving is fun. | | | | | |
| I don't like saving because I think saving makes you think about money too much. | | | | | |
| I don't like to worry about money and therefore I save. | | | | | |
| Money I earn is spent more carefully. | | | | | |
| Saving makes me feel save. | | | | | |
| Managing to save makes me feel proud of myself. | | | | | |
| I only save money when I don't know what to spend it on. | | | | | |
| I think people of my age should not need to save money. | | | | | |
| I think saving is not necessary when you live at home and your parents support you financially. | | | | | |
| Pocket money is there to be spent. | | | | | |
| Saving is something one should learn when little. | | | | | |
| I think parents should control their children's money management. | | | | | |
| Saving is something everybody can learn. | | | | | |
| I think I have the right to do whatever I want with my money, especially when I earn it myself. | | | | | |
| When I get money, I always spend it immediately (within 1 or 2 days). | | | | | |
| Spending all my money doesn't feel good or right. | | | | | |
| Saving is for adults. | | | | | |
| I think you can be proud when you manage to save for something really expensive. | | | | | |

| STATEMENT | Strongly disagree | disagree | Neither agree, nor disagree | agree | Strongly agree |
|---|-------------------|----------|-----------------------------|-------|----------------|
| By saving you can impress others. | | | | | |
| I would only start saving up now for something, I could buy in less than a month time. | | | | | |
| Everybody should save. | | | | | |
| Saving is something I do regularly, because my parents wanted me to save when I was little. | | | | | |
| As far as I know, some of my friends regularly do save with a savings account. | | | | | |
| My parents are proud of me for saving. | | | | | |
| I regularly put money in a savings account. | | | | | |

In the following you find a variety of reasons people have for saving. How important are each of these reasons to you?

| MOTIVE | Not at all important | Fairly important | Slightly important | Very important | Extremely important |
|--|----------------------|------------------|--------------------|----------------|---------------------|
| I save money so when I see something I can just buy it. | | | | | |
| I always keep some money aside, in case I need to buy something I hadn't planned for. | | | | | |
| I save money, because it's always good to have a reserve, in case I break, lose or damage something that needs to be replaced. | | | | | |
| I save money so I shall have money if I want to buy something special. | | | | | |
| I save, because when I'm grown up, I might not have enough money. | | | | | |
| I save money in order to be on the save side. | | | | | |
| I save money because we (family) will need it. | | | | | |
| I save money because one day my parents will stop giving it to me. | | | | | |
| I save money in order to have a buffer just in case. | | | | | |
| I save money because I will need it when I leave home. | | | | | |
| I save money so that I've got some when I'm an adult. | | | | | |
| I save money for things I want to buy in a couple of years time (like a motorbike, a car, etc.) | | | | | |
| I save money for a gap-year. | | | | | |
| I save money because I like seeing the pile of money I have grow. | | | | | |
| I save money because I like people to be proud of me. | | | | | |
| I save money for a holiday after I finish school. | | | | | |
| I regularly put money aside to pay for (part of) my further education. | | | | | |
| I save money with a bank because of the interest I get. | | | | | |
| I regularly save money because sometimes my parents double it. | | | | | |
| I save money so I can buy birthday and Christmas presents for my friends and family. | | | | | |
| I regularly save money for things that are too expensive to be bought from one-time pocket money. | | | | | |
| I save money so that I have more when we go on holiday. | | | | | |
| I save money for parties I go to. | | | | | |
| I save money to pay my parents back when they gave me some in advance. | | | | | |
| I regularly put money aside for music lessons, sport or leisure activities I have to pay for myself. | | | | | |
| I save money for school trips that my parents would only pay for half. | | | | | |
| I save money, because then I don't have to ask my parents for the more expensive things I want to buy. | | | | | |
| I save money because I like the feeling of being able to do things that cost money whenever I want. | | | | | |
| I save money in order to show my parents that I'm able to provide for things that I like when I want them. | | | | | |
| I save money regularly because it helps me to feel in control of my finances. | | | | | |
| I save money to enable me to do things my parents might dislike. | | | | | |
| I save money because it increases my freedom to buy or do things. | | | | | |
| I save in order to start my own business. | | | | | |
| I save money because I like to invest in a business in the future. | | | | | |
| I save money because it makes me feel proud of myself. | | | | | |
| I regularly put money aside because it makes me feel good. | | | | | |
| I regularly put money aside because it makes me feel in control of my finances. | | | | | |
| I save money because I like the feeling of having lots of cash. | | | | | |
| I regularly save money because it helps me to manage my money. | | | | | |

Sometimes you might find that you want to buy something but it costs more than you can save in two months. How would you go about getting the money for the thing you want to buy? There are 14 different options written below. Please read all of them carefully and then put the numbers 1 to 3 in the box by the option you are most likely to do (1 = first thing you would do, 2 = second thing you would do, 3 = third thing you would do).

When I want something that is too expensive for me to buy with the money I get in 2 months, I...

- ... ask my parents whether they would buy it for me
- ... calculate how long it would take me to save up for it
- ... think about my savings and whether I would want to dig into them
- ... try to negotiate with my parents
- ... negotiate with my parents for as long as it takes me to make them change their mind
- ... make a savings plan
- ... ask my parents to get it for me for my birthday or for Christmas
- ... start saving
- ... take on a Saturday-job or a paper-round
- ... do more work at home in order to earn some extra-money
- ... stop spending money on little things I usually buy
- ... start saving but stop after a while
- ... go to see my grand-parents and ask my parents whether they would buy it for me
- ... other (please explain) _____

Appendix 2: Questionnaire Pilot Study 2



QUESTIONNAIRE

1. General Information

| | | |
|------|------|--|
| RCCS | 0603 | |
|------|------|--|

- 1 How old are you? years
 2 What gender are you? male female

2. Saving-attitudes

In the table below there are a number of statements about saving (some made by teenagers in Exeter). Please indicate how much you agree or disagree with each statement.

| STATEMENT | Strongly disagree | disagree | Neither agree, nor disagree | agree | Strongly agree |
|---|-------------------|----------|-----------------------------|-------|----------------|
| Saving is easy. | | | | | |
| When I'm tempted to spend the money I want to save, I try to think very hard of the thing I'm saving for. | | | | | |
| I think it's good when parents control your spending. | | | | | |
| I don't save, because I think it's too hard. | | | | | |
| I never tried to save my money. | | | | | |
| I think parents should help you with your money-management. | | | | | |
| I think saving money is not necessary as long as you live at home and your parents look after you. | | | | | |
| I have never saved for a desired item. | | | | | |
| I save money, because I don't think my parents should pay for things I don't really need but like. | | | | | |
| I don't manage to save up for something that would imply saving for longer than two weeks. | | | | | |
| I don't manage to save up for something that would imply saving for longer than one month. | | | | | |
| I save by spending a little and regularly putting part of my money aside. | | | | | |
| By saving you stay in control of your finances. | | | | | |
| I save up by not spending at all. | | | | | |
| I don't need to save up for anything because my parents buy me the things I like. | | | | | |
| I don't save money but try to get more money out of my parents. | | | | | |
| I save because saving is a good thing to do. | | | | | |
| I save because it gives me a feeling of security. | | | | | |
| I save money because I think one should not spend it unnecessarily. | | | | | |

| STATEMENT | Strongly disagree | disagree | Neither agree, nor disagree | agree | Strongly agree |
|---|-------------------|----------|-----------------------------|-------|----------------|
| I don't save, because it is difficult when you only have a small amount of money anyway. | | | | | |
| I think younger people are not aware of the value of money. | | | | | |
| Saving is something you only do when need be. | | | | | |
| Saving is fun. | | | | | |
| When I earn money, I spend it more easily. | | | | | |
| I don't need to save because my parents buy me the things I like, even if these are expensive. | | | | | |
| When I see something expensive I like, I wouldn't expect my parents to get it for me. | | | | | |
| I don't like saving because I think saving makes you think about money too much. | | | | | |
| I don't like to worry about money and therefore I save. | | | | | |
| Money I earn is spent more carefully. | | | | | |
| Saving makes me feel save. | | | | | |
| I like saving. | | | | | |
| Managing to save makes me feel proud of myself. | | | | | |
| I like saving because I like thinking about the amount of money I have. | | | | | |
| I only save money when I don't know what to spend it on. | | | | | |
| I think people of my age should not need to save money. | | | | | |
| I think saving is not necessary when you live at home and your parents support you financially. | | | | | |
| Pocket money is there to be spent. | | | | | |
| Saving is something everybody can learn. | | | | | |
| I think I have the right to do whatever I want with my money, especially when I earn it myself. | | | | | |
| When I get money, I always spend it immediately (within 1 or 2 days). | | | | | |
| Spending all my money doesn't feel good or right. | | | | | |
| Saving is for adults. | | | | | |
| I think you can be proud when you manage to save for something really expensive. | | | | | |
| By saving you can impress others. | | | | | |
| I would only start saving up now for something, I could buy in less than a month time. | | | | | |
| Everybody should save. | | | | | |
| I try to save money because I know that my parents don't like it when I rely on them. | | | | | |
| Saving is easy. | | | | | |
| Saving is something I do regularly, because my parents wanted me to save when I was little. | | | | | |
| As far as I know, some of my friends regularly do save with a savings account. | | | | | |
| My parents are proud of me for saving. | | | | | |
| My parents expect me to earn money. | | | | | |
| I regularly put money in a savings account. | | | | | |
| I appreciate it when my parents give me advice about what to do with my money. | | | | | |
| I don't like it when my parents ask me what I do with my money. | | | | | |
| If my parents knew what I spend my money on, they would not like it. | | | | | |
| When I have trouble with my money, I always talk about it with my parents first. | | | | | |
| I would not talk about things I plan to buy with my parents. | | | | | |
| I don't save because the money my parents give to me is for spending. | | | | | |
| Saving is something one should learn when little. | | | | | |
| I ask my parents for advice before I buy something expensive. | | | | | |
| I mainly talk with my friends about things I plan to buy. | | | | | |
| My parents don't like it when I ask them for extra money. | | | | | |
| I think parents should control their children's money management. | | | | | |
| I don't need to save because my parents give me more money than I usually spend. | | | | | |
| I regularly put money in a savings account. | | | | | |

3. Saving-motives

In the following you find a variety of reasons people have for saving.
How important are each of these reasons to you?

| MOTIVE | Not at all important | Slightly important | Fairly important | Very important | Extremely important |
|--|----------------------|--------------------|------------------|----------------|---------------------|
| I save money so when I see something I can just buy it. | | | | | |
| I save money in order to be on the save side. | | | | | |
| I save money because we (family) will need it. | | | | | |
| I always keep some money aside, in case I need to buy something I hadn't planned for. | | | | | |
| I save money, because it's always good to have a reserve, in case I break, lose or damage something that needs to be replaced. | | | | | |
| I save money so I shall have money if I want to buy something special. | | | | | |
| I save, because when I'm grown up, I might not have enough money. | | | | | |
| I save money because one day my parents will stop giving it to me. | | | | | |
| I save money in order to have a buffer just in case. | | | | | |
| I save money because I will need it when I leave home. | | | | | |
| I save money so that I've got some when I'm an adult. | | | | | |
| I save money for things I want to buy in a couple of years time (like a motorbike, a car, etc.) | | | | | |
| I save money for a gap-year. | | | | | |
| I save money because I like seeing the pile of money I have grow. | | | | | |
| I save money because I like people to be proud of me. | | | | | |
| I save money for a holiday after I finish school. | | | | | |
| I regularly put money aside to pay for (part of) my further education. | | | | | |
| I save money with a bank because of the interest I get. | | | | | |
| I regularly save money because sometimes my parents double it. | | | | | |
| I save money so I can buy birthday and Christmas presents for my friends and family. | | | | | |
| I regularly save money for things that are too expensive to be bought from one-time pocket money. | | | | | |
| I save money so that I have more when we go on holiday. | | | | | |
| I save money for parties I go to. | | | | | |
| I regularly put money aside for music lessons, sport or leisure activities I have to pay for myself. | | | | | |
| I save money for school trips that my parents would only pay for half. | | | | | |
| I save money, because then I don't have to ask my parents for the more expensive things I want to buy. | | | | | |
| I save money in order to show my parents that I'm able to provide for things that I like when I want them. | | | | | |
| I save money to enable me to do things my parents might dislike. | | | | | |
| I save money because it increases my freedom to buy or do things. | | | | | |
| I save in order to start my own business. | | | | | |
| I save money because I like to invest in a business in the future. | | | | | |
| I regularly put money aside because it makes me feel good. | | | | | |
| I regularly put money aside because it makes me feel in control of my finances. | | | | | |
| I save money because it makes me feel proud of myself. | | | | | |
| I save money because I like the feeling of having lots of cash. | | | | | |
| I regularly save money because it helps me to manage my money. | | | | | |

4. 'What would YOU do?'

Sometimes you might find that you want to buy something but it costs more than you can get in one month. How would you go about getting the money for the thing you want to buy?

There are 15 different possibilities written below. Please read all of them carefully. Then think about the possibilities that describe best how you would go about getting the money for the thing you want to buy. Ask yourself for every description 'Would this be an option for me?' – and indicate the likeliness of choosing this option by ticking the appropriate box on the right hand side of the table.

When I want something that is too expensive for me to buy with the money I can get in one month, I...

| STATEMENT | Would certainly not do this | Very unlikely to do this | Unlikely to do this | Would possibly do this | Likely to do this | Very likely to do this | Would certainly do this |
|---|-----------------------------|--------------------------|---------------------|------------------------|-------------------|------------------------|-------------------------|
| ... ask my parents whether they would buy it for me | | | | | | | |
| ... go out / into town less often | | | | | | | |
| ... think about my savings and whether I would want to dig into them | | | | | | | |
| ... try to negotiate with my parents | | | | | | | |
| ... sell things (i.e. toys, game boy, mobile phone, etc.) to friends | | | | | | | |
| ... start saving | | | | | | | |
| ... take on a Saturday-job or a paper-round | | | | | | | |
| ... ask for more shifts at work | | | | | | | |
| ... do more work at home in order to earn some extra-money | | | | | | | |
| ... stop spending money on some of the things I usually buy | | | | | | | |
| ... sell toys and things I could do without at a car boot sale | | | | | | | |
| ... calculate how long it would take me to save up for it | | | | | | | |
| ... buy cheaper things | | | | | | | |
| ... sell things (i.e. toys, game boy, mobile phone, etc.) to a second hand shop | | | | | | | |
| ... ask my grand-parents whether they would buy it for me | | | | | | | |
| ... other (please explain): | | | | | | | |

Appendix 3: Questionnaire Study 2



| | | | | |
|---------------|------|--|--|--|
| QUESTIONNAIRE | CODE | | | |
|---------------|------|--|--|--|

GENERAL INFORMATION

| | |
|---|--|
| How old are you? | _____ years |
| Are you a boy or a girl? | <input type="checkbox"/> boy <input type="checkbox"/> girl |
| Do you get pocket money/an allowance? | <input type="checkbox"/> yes <input type="checkbox"/> no |
| How much money do you GET FROM YOUR PARENTS on average each month? | £ _____ |
| Do you sometimes do small jobs at home (i.e. washing cars) to earn money from your parents/step-parents? | <input type="checkbox"/> yes <input type="checkbox"/> no |
| Do you sometimes do little jobs for people other than your parents/step-parents for which you get paid (for example, washing cars for neighbours, babysitting)? | <input type="checkbox"/> yes <input type="checkbox"/> no |
| Do you have any out of school-hours employment, for which you are paid (like a paper round, or a Saturday-job)? | <input type="checkbox"/> yes <input type="checkbox"/> no |
| How much money do you EARN on average each month? | £ _____ |

- 1 What do you usually do with your pocket money / allowance? I don't get pocket money / an allowance
- ... save all of it ... save most of it ... save some and spend some ... spend most of it ... spend all of it
- 2 What do you usually do with the money you earn? I don't earn money
- ... save all of it ... save most of it ... save some and spend some ... spend most of it ... spend all of it
- 3 Read the statements below carefully and tick the circle that shows how much you agree or disagree with them.
- I like spending money. strongly disagree disagree neither agree nor disagree agree strongly agree
- I'm good at saving. strongly disagree disagree neither agree nor disagree agree strongly agree
- I usually give in to temptation. strongly disagree disagree neither agree nor disagree agree strongly agree
- 4 When I get pocket money, I usually I don't get pocket money/an allowance
- Spend it carefully, so that I always have some left Make sure I can spend a little bit every day until I get more Spend some of it every day until I run out Spend all of it within a few days Spend all of it within one day
- 5 How do you deal with your money in general?
- ... keep as much as I can ... spend it carefully ... spend some and save some ... spend it easily ... spend it easily and quickly

| How do you stop yourself from spending money when you are trying to save up for something? I ... | Would certainly not do this | Very unlikely to do this | Unlikely to do this | Would possibly do this | Likely to do this | Very likely to do this | Would certainly do this |
|---|-----------------------------|--------------------------|---------------------|------------------------|-------------------|------------------------|-------------------------|
| ... give my money to my mum or someone else to look after. | | | | | | | |
| ... give my bank card to mum or someone else. | | | | | | | |
| ... leave money or bank card at home. | | | | | | | |
| ... leave part of it at home. | | | | | | | |
| ... leave all of it at home. | | | | | | | |
| ... put all my money in my money box. | | | | | | | |
| ... make my mum or someone else put it in my bank account. | | | | | | | |
| ... hide my money and/or bank card. | | | | | | | |
| ... put my money in my bank account. | | | | | | | |
| ... try to forget about my money. | | | | | | | |
| ... limit myself, try to budget. | | | | | | | |
| ... don't break into large notes. | | | | | | | |
| ... use will-power, control myself. | | | | | | | |
| ... concentrate on what I'm saving for. | | | | | | | |
| ... avoid shops and places that involve money, look away. | | | | | | | |
| ... go and look at what I'm saving for, as often as possible. | | | | | | | |
| ... do something else to distract myself. | | | | | | | |
| Other (please explain): _____ | | | | | | | |

Read the statements below carefully and tick the box that shows how much you agree or disagree with them.

| | Strongly disagree | disagree | Neither agree nor disagree | agree | Strongly agree |
|---|-------------------|----------|----------------------------|-------|----------------|
| I don't manage to save up for something that would imply saving for longer than one month. | | | | | |
| I save because saving is a good thing to do. | | | | | |
| By saving you can impress others. | | | | | |
| I don't need to save because my parents buy me the things I like, even if these are expensive. | | | | | |
| I don't like it when my parents ask me what I do with my money. | | | | | |
| I save because it gives me a feeling of security. | | | | | |
| When I get money, I always spend it immediately (within 1 or 2 days). | | | | | |
| Managing to save makes me feel proud of myself. | | | | | |
| I don't save because the money my parents give to me is for spending. | | | | | |
| I think I have the right to do whatever I want with my money, especially when I earn it myself. | | | | | |
| I don't need to save up for anything because my parents buy me the things I like. | | | | | |
| I think saving money is not necessary as long as you live at home and your parents support you financially. | | | | | |
| I regularly put money in a savings account. | | | | | |
| I don't save because I think it's too hard. | | | | | |
| I think you can be proud when you manage to save for something really expensive. | | | | | |
| I don't need to save because my parents give me more money than I usually spend. | | | | | |
| I think it's a good thing to ask your parents to keep hold of your money/cash card sometimes, to help you save. | | | | | |
| I think it's good when parents control your spending. | | | | | |
| Saving is something one should learn when little. | | | | | |
| Saving is for adults. | | | | | |
| I don't like saving because I think saving makes you think about money too much. | | | | | |
| My parents are proud of me for saving. | | | | | |
| I appreciate it when my parents give me advice about what to do with my money. | | | | | |
| I save money because I think one should not spend it unnecessarily. | | | | | |
| Saving is easy. | | | | | |
| I don't save money but try to get more money out of my parents. | | | | | |
| I think parents should help you with your money-management. | | | | | |
| I think people of my age should not need to save money. | | | | | |
| I think parents should control their children's money management. | | | | | |
| Pocket money is there to be spent. | | | | | |

I would also like you to describe yourself using the opposites below. Each line contains one pair of opposite qualities. Tick one circle on each line that YOU think best describes you on that scale. For example, if you think you are *easily worried*, tick the circle at the very left that's close to this quality. And if you think you are more *carefree* than *anxious*, tick a circle on that row, near the right hand side closer to the quality *carefree*. **Make sure you tick one circle on EACH line.**

| | | | | | | | | |
|------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|------------------------------|
| easily worried | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | not easily worried |
| take little care | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | take lots of care |
| not disciplined | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | disciplined |
| anxious | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | carefree |
| stick to my principles | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | don't stick to my principles |
| self-controlled | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | not self-controlled |

- 6 How good an example do you think your mum is for you, when it comes to money management?
 ... very bad example ... bad example .. neither good nor bad example ... good example ... very good example
- 7 How good an example do you think your dad is for you, when it comes to money management?
 ... very bad example ... bad example .. neither good nor bad example ... good example ... very good example
- 8 How often do you talk about money matters with your mum?
 ... rarely .. less than once a month .. once a month I don't. ... once a week ... every day
- 9 How often do you talk about money matters with your dad?
 ... rarely .. less than once a month .. once a month I don't. ... once a week ... every day

In the following you find a variety of reasons people have for saving. How important are each of these reasons to you?

| | Not at all important | Slightly important | Fairly important | Very important | Extremely important |
|--|----------------------|--------------------|------------------|----------------|---------------------|
| I save money so I can buy birthday and Christmas presents for my friends and family. | | | | | |
| I save money so I shall have money if I want to buy something special. | | | | | |
| I save money in order to have a buffer just in case. | | | | | |
| I save money because then, I don't have to ask my parents for the more expensive things I want to buy. | | | | | |
| I save money because I like seeing the pile of money I have grow. | | | | | |
| I regularly put money aside because it makes me feel in control of my finances. | | | | | |
| I save money for things I want to buy in a couple of years (like a motorbike, a car, etc.). | | | | | |
| I regularly put money aside to pay for (part of) my further education. | | | | | |
| I regularly save money for things that are too expensive to be bought from one-time pocket money. | | | | | |
| I always keep some money aside, in case I need to buy something I hadn't plan for. | | | | | |
| I save money, because it's always good to have a reserve, in case I break, lose or damage something that needs to be replaced. | | | | | |
| I save money because I like the feeling of being able to do things that cost money whenever I want. | | | | | |
| I save money because I like the feeling of having lots of cash. | | | | | |
| I regularly save money because it helps me to manage my money. | | | | | |
| I save, because when I'm grown up, I might not have enough money. | | | | | |
| I save money for a holiday after I finish school. | | | | | |
| I save money so that I've got some when I'm an adult. | | | | | |
| I save money regularly because it helps me to feel in control of my finances. | | | | | |
| I save money because it increases my freedom to buy or do things. | | | | | |
| I regularly put money aside because it makes me feel good. | | | | | |
| I save money in order to be on the safe side. | | | | | |
| I save money so that I have more when we go on holiday. | | | | | |
| I save money because I like people to be proud of me. | | | | | |
| I save money to enable me to do things my parents might dislike. | | | | | |
| I save money because sometimes my parents double it. | | | | | |
| I save money because I will need it when I leave home. | | | | | |
| I save in order to start my own business. | | | | | |
| I save money with a bank because of the interest I get. | | | | | |
| I save money in order to show my parents that I'm able to provide for things that I like when I want them. | | | | | |
| I save money because it makes me feel proud of myself. | | | | | |
| I save money because one day my parents will stop giving it to me. | | | | | |
| I save money because I like to invest in a business in the future. | | | | | |
| I save money to pay my parents back when they gave me some in advance. | | | | | |

The following two questions are about how well-off you think you are compared to your best friends.

10 With regard to the money my parents give to me, I think in comparison to my best friends, I get a lot less a little less about the same a little bit more I don't get pocket money/an allowance ... a lot more

11 With regard to the money I earn, I think in comparison to my best friends, I earn a lot less ... a little less about the same a little bit more I don't earn money (myself). ... a lot more

Read the statements below carefully and tick the box that shows how much you agree or disagree with them.

| | Strongly disagree | disagree | Neither agree nor disagree | agree | Strongly agree |
|--|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| Activities I do in my free time usually involve spending money. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I meet up with my friends we regularly spend money. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| In my free time, I rarely come close to shops where money could be spent. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| On my way to school, I regularly see things I'd consider buying. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Life is expensive. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I need a lot of money for all the things I do (i.e. going out, hobbies, sport, etc). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

- 12 Have you ever tried saving up for anything? yes no (go to question 16)
- 13 What was the most expensive thing you ever bought from money you had saved? I bought _____ .
- 14 How much did it cost? £ _____ .
- 15 How long did it take you in total to save this much money? _____ weeks.
- 16 Are you saving up for anything at the moment? yes no (go to the table below)
- 17 What are you saving for? I am saving for _____ .
- 18 How much will it cost? £ _____ .
- 19 How long will it take you in total to save this much money? _____ weeks.

Read the statements below carefully and tick the box that shows how much you agree or disagree with them.

| | Strongly disagree | disagree | Neither agree nor disagree | agree | Strongly agree |
|--|-------------------|----------|----------------------------|-------|----------------|
| I believe that a person's day should be planned ahead each morning. | | | | | |
| I do things spontaneously. | | | | | |
| When I want to achieve something, I set goals and think about different ways of reaching them. | | | | | |
| Doing what's necessary for tomorrow comes before what's fun today. | | | | | |
| I try to get as much as I can out of life, every day. | | | | | |
| I'm always late. | | | | | |
| I don't like being late when I meet up with friends. | | | | | |
| I sometimes plan things to do in a weekend that's 2 weeks ahead. | | | | | |
| I only meet up with friends when my homework is completed. | | | | | |
| I always stick to my plan. | | | | | |
| I usually think of birthday presents for my friends at least a week ahead. | | | | | |
| I do what I should do for teachers on time. | | | | | |
| I make decisions as they come. | | | | | |
| I generally don't like being late. | | | | | |
| I take each day as it comes instead of making plans. | | | | | |
| I like my life to be exciting. | | | | | |
| Taking risks makes my life less boring. | | | | | |
| It is more important for me to have fun now than to focus on future outcomes. | | | | | |
| I usually leave things until the last minute. | | | | | |
| I make lists of things to do. | | | | | |
| I often follow my heart more than my head. | | | | | |
| I am able to resist temptation when I know that there is work to be done. | | | | | |
| I do what I should do for friends on time. | | | | | |
| I'm a planner. | | | | | |
| I favour friends who are spontaneous rather than predictable. | | | | | |
| I don't give up when things get difficult or boring. | | | | | |

Please read the following statements carefully. Take your time for each one and tick the box that best describes YOU.

| Statement | Not at all like me | Not like me | Half like me | Like me | Very much like me |
|--|--------------------|-------------|--------------|---------|-------------------|
| I often work on things that will only pay off in a couple of years. | | | | | |
| I only care about what happens today or tomorrow, because I think that things in the future will work themselves out ok. | | | | | |
| I only think about the short-term consequences of what I do (say a period of a couple of hours or days). | | | | | |
| I usually take the easy option when making decisions. | | | | | |
| I don't care about warnings of problems in the future, because I think things will work out ok before they get too bad. | | | | | |
| There is no need to miss out on fun now just to avoid problems in the future; they can be solved later. | | | | | |
| I only care about the here and now, future problems can wait. | | | | | |
| Things I do every day that I can immediately see the outcomes of are more important to me than things where I have to wait a long time to see the outcome. | | | | | |

THANK YOU!

Appendix 4: Saving Attitudes (adolescents)

‘Saving attitude scale’ (adolescents)

| subscale | item |
|-------------------------------|---|
| struggle | |
| ass1 | I don't manage to save up for something that would imply saving for longer than one month. |
| ass2 | When I get money, I always spend it immediately (within 1 or 2 days). |
| ass3 | I don't save because I think it's too hard. |
| ass4 | I don't like saving because I think saving makes you think about money too much. |
| ass5r | Saving is easy. |
| ass6r | I regularly put money in a savings account. |
| saving is a good thing | |
| asg1 | I save because saving is a good thing to do. |
| asg2 | I save because it gives me a feeling of security. |
| asg3r | Saving is for adults. |
| asg4r | Pocket money is there to be spent. |
| asg5r | I think people of my age should not need to save money. |
| asg6 | I save money because I think one should not spend it unnecessarily. |
| asg7r | I think saving money is not necessary as long as you live at home and your parents support you financially. |
| pride | |
| asp1 | By saving you can impress others. |
| asp2 | Managing to save makes me feel proud of myself. |
| asp3 | I think you can be proud when you manage to save for something really expensive. |
| asp4 | Saving is something one should learn when little. |
| asp5 | My parents are proud of me for saving. |
| dependency on parents | |
| apd1 | I don't save money but try to get more money out of my parents. |
| apd2 | I don't need to save up for anything because my parents buy me the things I like. |
| apd3 | I don't need to save because my parents buy me the things I like, even if these are expensive. |
| apd4 | I don't save because the money my parents give to me is for spending. |
| apd5 | I don't need to save because my parents give me more money than I usually spend. |
| parents as guides | |
| apg1 | I think it's good when parents control your spending. |
| apg2 | I think parents should control their children's money management. |
| apg3 | I think parents should help you with your money-management. |
| apg4 | I appreciate it when my parents give me advice about what to do with my money. |
| apg5r | I don't like it when my parents ask me what I do with my money. |
| apg6r | I think I have the right to do whatever I want with my money, especially when I earn it myself. |
| apg7 | I think it's a good thing to ask your parents to keep hold of your money/cash card sometimes, to help you save. |

Appendix 5: Questionnaire Pilot Study 4



POCKET MONEY MANAGEMENT

You are male female Your child is ...years old.

Some parents consider the money they give to their child spending money. Others think that children should learn to save when young. Listed below are a number of ways in which a parent could help a child manage money or save up for something. Please indicate whether you do any of these at the moment. Please answer this as honestly as you can. If you read something you consider a good thing to do but you have not done it (yet), then please tick 'never'. If you read something you used to do when your child was younger but don't do it any more, then please tick 'not any more'.

| Statements | Not any more | No, never | Yes, but rarely | Yes, sometimes | Yes, often | Yes, most of the time |
|--|--------------|-----------|-----------------|----------------|------------|-----------------------|
| I allow my child to draw on her/his savings. | | | | | | |
| I encourage my child to tell me how s/he spends her/his money | | | | | | |
| I encourage my child not to touch her savings until sometime in future. | | | | | | |
| I offer my child to look after her/his money. | | | | | | |
| I volunteer to make deposits for my child (during school hours). | | | | | | |
| I praise my child for saving money. | | | | | | |
| I look after my child's money (or bank card) when s/he wants me to. | | | | | | |
| I show interest in my child's saving. | | | | | | |
| I remind my child that sometime in future s/he will appreciate having saved. | | | | | | |
| I talk about ways to limit spending. | | | | | | |
| I advise my child to only carry a certain amount with her/him. | | | | | | |
| I help my child differentiate between things s/he really needs and things s/he wants. | | | | | | |
| I take her/him to the bank to deposit her/his savings together. | | | | | | |
| I talk about things s/he might want to spend more money on when s/he is a bit older. | | | | | | |
| I remind her/him of her/his current saving goal when new ideas for spending come up. | | | | | | |
| I put some money towards things my child has her/his heart set on, provided that my child pays or saves some money towards it. | | | | | | |
| When I put money towards things my child is buying, I make sure that my child knows from the beginning how much money I will pay towards it. | | | | | | |
| When I put money towards things my child is buying, I end up paying a bit more towards it than initially planned. | | | | | | |
| I talk about her/his bank statements. | | | | | | |
| I restrict my child's spending. | | | | | | |
| I help my child calculate how long s/he would have to save up for something | | | | | | |
| I monitor my child's spending behaviour. | | | | | | |
| I provide pocket money in advance. | | | | | | |
| I often talk to my child about money. | | | | | | |
| I often argue with my child about money. | | | | | | |
| My child and I review her/his spending. | | | | | | |
| I suggest activities that don't involve spending money. | | | | | | |
| I encourage my child to plan her/his saving. | | | | | | |
| I suggest avoiding shops and places that involve money. | | | | | | |
| I encourage my child to keep track of her/his expenditures. | | | | | | |
| I suggest writing down what goal s/he has settled on. | | | | | | |
| I talk to my child to help her/him setting priorities. | | | | | | |
| I manage to be consistent in the rules we have set up around money matters | | | | | | |
| Other (please explain). | | | | | | |

Read the statements below carefully and tick the box that shows how much you agree or disagree with them. Again, it is important that you do this as honestly as possible.

| Statements | Strongly disagree | disagree | Neither agree nor disagree | agree | Strongly agree |
|---|-------------------|----------|----------------------------|-------|----------------|
| My child sometimes manages to get more money out of me. | | | | | |
| My child doesn't need to save up for anything because I buy her/him the things s/he likes. | | | | | |
| The money I give to my child is for spending. | | | | | |
| My child doesn't need to save because I give her/him more money than s/he usually spends. | | | | | |
| I don't want my child to worry about money, so I make sure s/he always has enough on her/him. | | | | | |
| I think parents should help their child with money-management. | | | | | |
| My child appreciates it when I give her/him advice about what to do with her/his money. | | | | | |
| My child doesn't like it when I ask her/him what s/he does with her/his money. | | | | | |
| I think my child has the right to do whatever s/he wants to do with her/his money, especially when s/he earns it herself/himself. | | | | | |
| Children should save money because it is a good thing to do. | | | | | |
| Saving is for adults. | | | | | |
| I think people as young as my child should not need to save money. | | | | | |
| I think parents should not let their child spend money unnecessarily. | | | | | |
| I think it is not necessary for children to save money as long as they live at home and are financially supported by their parents. | | | | | |
| I think my child can be proud when s/he manages to save for something really expensive. | | | | | |
| Saving is something one should learn when little. | | | | | |
| I am proud of my child for saving. | | | | | |
| I try to demonstrate good financial management for my child in the handling of my own finances. | | | | | |
| The allowance system/ regular pocket money has reduced discussions about money. | | | | | |
| The allowance system/ regular pocket money gives us a chance to talk about money. | | | | | |
| By saving money myself, I set an example for my child. | | | | | |
| When pocket money is given in advance, I sometimes turn a blind eye when it comes to the next lot that should not be paid to her/him. | | | | | |

What do you expect your child to use her/his pocket money/ allowance for?

THANK YOU !

Appendix 6: Cover letter for parents in Study 4



UNIVERSITY OF EXETER INTER-GENERATION MONEY MANAGEMENT PROJECT

Thank you for taking the time to help us with this important project.

Your contribution to this study is essential as we need lots of families to take part and we need information from each generation of families. Your child has already completed their questionnaire.

Money management is a key feature of all our lives. We are looking at the people's thoughts about this topic across several generations. This project is funded and run by the University of Exeter.

TO SAY THANK YOU FOR TAKING PART we will give a £5 cinema voucher to each child whose family returns a completed set of **ALL** their questionnaires. Plus each family that returns a completed set of **ALL** their questionnaires will be entered into a prize draw.

1 x 1st Prize: a long weekend break at CenterParcs for your family*
2 x 2nd Prize: cinema vouchers for the whole family (worth £50)

*subject to terms and conditions

THIS STUDY IS COMPLETELY CONFIDENTIAL.

Any connection between names and codes will only be used for purposes of thanking you and will be destroyed at the end of this study.

HOW TO TAKE PART:

1. **Complete the questionnaire attached about you and your child**
2. **Return it to the University using the freepost address (envelopes enclosed) by 11th MARCH 2005**
3. **If your child has told us they have grandparents then we have enclosed questionnaires for them (the yellow ones) and stamped envelopes. Please send these to them (either to your child's maternal or paternal grandparent(s) or both, depending on your family circumstances).**

If your child has told us they have grandparents but for any reason you do not wish or feel unable to forward the questionnaire to them please let us know by completing the section below. This way we will then still be able to thank you for returning a complete set of questionnaires from your family.

I have been unable to forward the questionnaires to my child's: Maternal grandparent(s) Paternal grandparent(s)

This is because _____

We will be conducting some short interviews on this topic later in the year. If you think you might be willing to take part then please leave your contact details below (please note that giving your contact details does not oblige you in any way to take part):

Name and telephone number: _____

If you have any questions please do not hesitate to contact us at the address below or you can phone or e-mail Annette Otto (01392 264633, a.m.c.otto@ex.ac.uk). Please return questionnaires to:

Money Management Project, School of Psychology, University of Exeter, Freepost (EX90) Exeter, EX1 1AZ

Appendix 7: Crossword story

STORY CROSSWORD

| | | | | | | | | | | | | | | | | | | | |
|-----|------------|-----|-----|----|-----|-----|----|-----|------------|------------|-----|----------|-----|-----|-----|-----|-----|-----|-----|
| D1 | | | | A2 | | | D2 | | D3 | | | | | D4 | | | | | D5 |
| A48 | | | b6 | | | | | | | | b7 | | A23 | | | | | A24 | 9 |
| | | A25 | 6 | | | A26 | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | A27 | | | D8 | 20 | |
| | | A28 | | | | b9 | | | | | | | | | | | | | |
| D10 | | | | | A29 | | | | 5 | | | | | | | | | | |
| | | | | | 16 | | | | | | A30 | b11 7 | | | | | | | D46 |
| A31 | | | | | | | | D12 | | | | | | | | | | | |
| | | | | | A32 | | 1 | | | | 18 | | | | | | | | |
| | | | | | | | | | | | | | A33 | | | | A47 | | |
| | | | | | | | | 21 | | | | | | | | | | | |
| | b13 A34 | | | | | | | | | A35 | | 15 | | | | | D14 | | |
| | 12 | | | | | | | | | | | | | | | | | | D16 |
| A36 | | | D17 | | | | | | | b18 A37 | 8 | 11 | | | | A38 | | | 17 |
| | | | | | | D19 | | | | 10 | | | | | | | | | |
| | | | 3 | | | | | | b20 A39 | | 4 | b21 | | | D15 | | | | |
| | | | | | | A40 | 2 | | | | | | | | A41 | | | | |
| | | | | | | | | | A42 | | | | | | | | | | |
| | A43 | | | | | 19 | | | 13 | | | A44 | 14 | | | A45 | | | |
| | | | | | | | | | | | | | | | | | | | |

If a friend at school has a pen which you like, you might, instead of giving _____^{D6}, offer two pencils in exchange _____^{A25} it. If you _____^{D20} agree that one pen is equal in value to _____^{A24} pencils, you are happy to _____^{D18} one for the other. This way of getting what you want is called _____^{A39}. You are bartering.

Thousands of years ago, before the invention of money, everyone had to get their food, clothes, and other necessary items by bartering. In those days, the population of the world was much smaller than it is today. Towns and villages were not very large and people did not have far to go to meet other villagers. If they were not growing enough _____^{A40} for themselves, they could easily find friends who would barter food for something else. If a _____^{A26} grew wheat, he could take some of it to a man who kept _____^{A45}. The pig-man might want the wheat to make bread for his _____^{D3}. He could _____^{D19} the farmer a pig in _____^{A32} for that wheat. The value would be agreed between them, and both would be _____^{A29}. If the farmer found he had too much pork left _____^{A22}, he would have to think again. A piece of cloth might be _____^{D11} to him. The farmer could take his extra pork to the weaver, who might be glad of a good dinner and be willing to give some cloth in exchange. They could barter on the amount of pork to be given in exchange for the cloth. When more important things were needed, more valuable goods would have to be given.

Barter was a good system provided it could be carried out on a small scale close to home, and as long as both parties wanted to barter at the same _____^{A37}. If they did not, bartering could prove difficult. So, something new began to happen. In most villages or countries there was often a special item valued by everyone. This item was usually _____^{A34} and might have been a metal object, a rare stone, or even special beads. A farmer who did not _____^{A44} any pork could still take his wheat to the pig-man if he knew that he could get some of these special items in exchange. The farmer could then go on to another village and swap them for the goods he really wanted. But, if he did not need anything immediately, he could _____^{A23} the items at home until he wanted to exchange them for something _____^{D21} later on. In this way he could store the value of his wheat. _____^{A42} was highly prized by some of the people in Mongolia, in western Asia, and by people in Russia and _____^{D12}. It was made into bricks, with designs and letters on the sides and was used as a form of money for buying goods. These tea bricks were carried by merchants and traders a long way across the northern part of Asia.

_____^{A35} was another valuable commodity. In Ethiopia, in Africa, it was made into blocks of equal size. These blocks had a regular value and were used for trade by the Ethiopians.

Large rings of stone were difficult to make in early times and such stones became highly valued on the Yap islands of the South Pacific. They were sometimes very large indeed, up to four metres (thirteen _____^{A28}) across.

Many different things were considered to be special, valuable items in different places in the world. Cowries are small, white seashells that are strong and smooth. There are many types of cowrie shell. _____^{D9} marked with a yellow circle on the back are called 'Gold Ring' cowries. One kind of cowrie shell was collected from the coasts around Thailand and Malaysia. Seven hundred years ago, the Venetian traveller, Marco Polo, found them being used there as a _____^{A33} of money. Cowries could be _____^{D14} for years without spoiling, and brought out again when they were needed.

Parts of Africa are rich in natural ores, from which good metal can be made. In the area we now call Nigeria, copper and tin were mined and then melted down to remove the dirt. These two metals were mixed together to make another metal, called bronze. Some people in this region knew how to

make horseshoe-shaped objects, called manillas, out of copper or bronze. In parts of West Africa the people valued these manillas, and they were able to use them for trading a long way from home. Manillas could be given one or more at a time and were carried in a _____^{D15}, or in a basket. The market-traders would take the manillas from their customers in payment for their goods.

Why do we use _____^{D4} for our money? There are many reasons. Metal can be melted, then moulded into different shapes, weighed out exactly and divided into pieces. It can also be carried without breaking. These qualities make metal a very convenient material to use for making money. Only when people want something does it have value. If an item is hard to find, or hard to make, it usually becomes more valuable. Bright _____^{A36} is both beautiful and rare. Long ago, in what is now _____^{A30}, the people of Lydia gave gold in exchange for goods. In about 600 BC, their king, Croesus, had a good idea. He had some of the gold divided into small lumps of equal weight. A _____^{D17} was stamped on each side of every lump to show its value and where it had come from. In spite of their untidy shapes, these stamped and weighed lumps were _____^{D2} coins.

About a hundred years later, in Greece, silver was mined around Laurium, near the city-state of Athens, and made into coins. At first these coins were rather rough, but soon the Greeks were making beautiful round coins with a design showing the goddess Athena. On the reverse of each one they put an owl, Athena's symbol, so that these coins were often called 'owls'. Other Greek states started to make and carefully stamp their own _____^{A38} at this time.

In ancient times the worth of a coin was determined by the value and weight of the metal from which it was made. The smaller the coin, the _____^{A31} it was _____^{D5}. The other way to make coins of lower value was to use a cheaper metal. For example, silver is less valuable than gold. Some countries used both metals, so that several silver coins were worth one gold one. Copper or bronze was used for the cheapest coins, many of which were needed to make the value of one _____^{D10} coin. The idea of making coins from three different metals has continued down to the present day.

Today, metal coins are made by machine, rather than by hand. If you look at your own coins you will see another difference. In the old days the worth of a silver coin equalled the value of the silver it contained. Now, instead of silver, a cheaper silver-coloured metal is often used, and coins _____^{D1} less to make than the value written on them. This is also true of bronze and copper-coloured coins.

So the coins in our pockets have this long history behind them. They now come in regular shapes and weights. We can count them out, so that one valuable coin is worth several of less value. Modern coins still have the emblem of their countries stamped on them. This emblem serves as a government guarantee that the coins are their own and are not to be copied.

Nearly everywhere in the world people now use money in the form of metal coins or _____^{D46} notes. Today it is possible to change one kind of money into another, so that it can be used more conveniently. Instead of putting your savings in a sack, you can take them to a bank. There, your money will be counted and kept safe for you. Your account number will stop your money getting mixed up with someone else's. If you want some money, you can sign a cheque and you will be given what you need from your own _____^{A27}. On every cheque is printed the cheque number, the account number, and the name of the _____^{A43}. _____^{D7} cards and charge cards are often used by people who don't want to pay for their goods all at _____^{A47}. If they trust you, banks _____^{A48} other credit companies will give you a plastic card with your name and number printed on it, and agree to pay the shopkeeper for the goods you buy with the card. Later, you must pay back the money you _____^{D8} to the bank or credit company, giving them some extra money, called _____^{D16}, for their help.

This way of buying may, therefore, 1 _ 2 _ 3 _ 4 _ 5 _ 6 _ 7 _ 8 _ 9 _ 10 _ 11 _ in 12 _ 13 _ 14 _ 15 _ 16 _ 17 _ 18 _ 19 _ 20 _ 21 _.

Appendix 8: Handout ‘Money Management’

MANAGING MONEY IS A SKILL THAT CAN BE LEARNED

1. What is a budget?

Having a budget simply means writing down a few things like:

- How much money you have
- Where it comes from
- Things you have to pay for
- Thing you buy (usually buy/like buying)

It sounds boring, but you'll probably have to try to write down what you spend each week for a month or two. Eventually you'll have a clear idea of how much money comes in and how much goes out.

The most essential thing you need to know about a budget is how much money you've got coming in and where it goes. Only then will you be able to make sensible decisions.

2. How to be systematic about your money?

Once you have decided to watch your money, you will need to know how to do it.

Make a list of your total income.

| Income per | Amount |
|---------------------|--------|
| Pocket money | |
| | |
| | |
| | |
| | |
| Total income | |

Whatever it is you buy with your money, it is good to keep track of where your money goes. It is spent so easily and sometimes you find it hard to remember by the end of the week, what you did spend it on.

Here's a chart to help you work out how much you need to spend each week and how much you spend each week on things you like.

| I spend money on (remember to include your hobbies): | Weekly spending |
|--|-----------------|
| | £ |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| Total expenditure: | £ |

Put here your total income and expenditure to see the balance of what you might have left over by the end of a month.

| | |
|-----------------------------|--|
| Total income per month | |
| Total expenditure per month | |
| Amount of money left over | |

3. How can I save my money?

Once you've decided to save some of your money to buy the latest video game, a birthday present for your granny, or something that's really expensive (e.g. a computer or even a horse), you need to make careful spending choices. You need to make sure you have some money left over at the end of each month to save towards the thing you want to buy!

| Things I like buying but could do without or less of (for a while) | Price |
|--|----------|
| | |
| | |
| | |
| | |
| | |
| Maximum amount of money I could save in a month | Total: £ |

Most important of a savings plan is to keep your goal in your mind.

| | |
|---|--------------------------|
| I'M SAVING FOR: | THIS WILL COST: £ |
| Therefore, I need to save for _____ months. | |

Make notes of your savings:

| Amount saved | Date |
|--------------|------|
| | |
| | |
| | |
| | |
| | |
| | |
| | |
| | |

Transfer your savings to your bank account !

Appendix 9: Questionnaire Study 1



| | | | | |
|---------------|------|--|--|--|
| QUESTIONNAIRE | CODE | | | |
|---------------|------|--|--|--|

GENERAL INFORMATION

- 1 How old are you? years
- 2 Are you a boy or a girl? Boy Girl

INCOME

The following questions all concern the income you have in a typical month. Be careful to answer all questions exactly. Things you are not asked in one question, you might be asked later in the questionnaire.

The questions start about money from home and on the next page you will be asked about money from people other than your parents/step-parents and money earned from part-time jobs.

MONEY FROM HOME

| | |
|----|--|
| 3 | Do you regularly get money (pocket money / allowance) from your parents, step-parents or grand-parents? <input type="radio"/> Yes <input type="radio"/> No (if no, go to question 8) |
| 4 | How often do you get the money? <input type="radio"/> once a week <input type="radio"/> every fortnight <input type="radio"/> every month |
| 5 | Is your money (pocket money / allowance) transferred directly to your bank account? <input type="radio"/> Yes <input type="radio"/> No |
| 6 | Who gives you this money? <input type="radio"/> Mum / Dad / Parents <input type="radio"/> Step-mum / Step-dad <input type="radio"/> Grandparents <input type="radio"/> Other |
| 7 | How much money (pocket money/allowance) do you get on average each month ? £ <input type="text"/> |
| 8 | Do you get birthday money? <input type="radio"/> Yes <input type="radio"/> No |
| 9 | Do you get holiday money? <input type="radio"/> Yes <input type="radio"/> No |
| 10 | Are you sometimes given money for certain activities (for example, when you go swimming or to see a film)? <input type="radio"/> Yes, for example when I do things like _____ . <input type="radio"/> No, I do not get such extra money (if no, go to question 12) |
| 11 | How much money like this do you get on average each month ? £ <input type="text"/> |
| 12 | Do you sometimes do small jobs at home (for example, washing cars) to earn money from your parents/step-parents? Yes <input type="radio"/> No <input type="radio"/> (if no, go to question 15) |
| 13 | Roughly, how often do you do these things? <input type="radio"/> occasionally <input type="radio"/> once per month <input type="radio"/> every fortnight <input type="radio"/> once per week <input type="radio"/> more than once per week |
| 14 | How much do you earn from doing small jobs for your parents/step-parents on average each month ? £ <input type="text"/> |

MONEY FROM JOBS

15 Do you sometimes do little jobs for people other than your parents/step-parents for which you get paid (for example, washing cars for your neighbours)?
 Yes No (if no, go to question 18)

16 Roughly, how often do you do these things?
 occasionally once per month every fortnight once per week more than once per week

17 How much do you earn from doing small jobs for people other than your parents/step-parents **on average each month**?
 £

18 Do you have any out of school-hours employment, for which you are paid (like a paper round, or a Saturday-job)?
 Yes No (if no, go to question 22)

19 What is your job? / What are your jobs? _____

20 Roughly, how often do you do this work?
 occasionally once per month every fortnight once per week more than once per week

21 How much do you earn from this job / these jobs **on average each month**?
 £

OTHER MONEY

22 Do you get any other money?
 Yes No (if no, go to question 25)

23 Where does this money come from?
 I get money from _____

24 How much is this **on average each month**?
 £

25 What do you usually do with your pocket money/allowance?
 I don't get pocket money/an allowance

| | | | | | | | | | |
|-------------------|-----------------------|--------------------|-----------------------|-----------------------------|-----------------------|---------------------|-----------------------|--------------------|-----------------------|
| 'Save all of it.' | <input type="radio"/> | 'Save most of it.' | <input type="radio"/> | 'Save some and spend some.' | <input type="radio"/> | 'Spend most of it.' | <input type="radio"/> | 'Spend all of it.' | <input type="radio"/> |
|-------------------|-----------------------|--------------------|-----------------------|-----------------------------|-----------------------|---------------------|-----------------------|--------------------|-----------------------|

26 What do you usually do with the money you earn?
 I don't earn money

| | | | | | | | | | |
|-------------------|-----------------------|--------------------|-----------------------|-----------------------------|-----------------------|---------------------|-----------------------|--------------------|-----------------------|
| 'Save all of it.' | <input type="radio"/> | 'Save most of it.' | <input type="radio"/> | 'Save some and spend some.' | <input type="radio"/> | 'Spend most of it.' | <input type="radio"/> | 'Spend all of it.' | <input type="radio"/> |
|-------------------|-----------------------|--------------------|-----------------------|-----------------------------|-----------------------|---------------------|-----------------------|--------------------|-----------------------|

27 When you are trying to save up for something, how do you stop yourself from spending too much?

28 Can you spend your money as you wish?

| | | | | |
|---|---|---|--|--|
| 'My parents/step-parents control all the things I spend my money on.' | 'My parents/step-parents control most of the things I spend my money on.' | 'I can spend some of my money how I wish and my parents/step-parents control the rest.' | 'I can spend most of my money how I wish.' | 'I can spend all my money how I wish.' |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

29 When I get pocket money, I usually I don't get pocket money/an allowance

| | | | | |
|--|---|---|-------------------------------------|----------------------------------|
| 'spend it carefully, so that I always have some left.' | 'make sure I can spend a little bit every day until I get more' | 'spend some of it every day until I run out.' | 'spend all of it within a few days' | 'spend all of it within one day' |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

30 Do you usually know beforehand what you are going to buy when you go to a shop?

| | | | | |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|

31 Read the statements below carefully and indicate to what degree you agree with them.

| Statement | Strongly disagree | disagree | Neither agree nor disagree | agree | Strongly agree |
|----------------------------------|-------------------|----------|----------------------------|-------|----------------|
| I like spending money | | | | | |
| There are a lot of things I want | | | | | |
| I'm good at saving | | | | | |
| I usually give in to temptation | | | | | |

32 How do you deal with your money in general?

| | | | | |
|--------------------------|-----------------------|-----------------------------|-----------------------|--------------------------------|
| 'Keep as much as I can.' | 'Spend it carefully.' | 'Spend some and save some.' | 'Spend it easily.' | 'Spend it easily and quickly.' |
| <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

33 What do you do when you run out of money?

GETTING LARGE SUMS OF MONEY

Sometimes you might find that you want to buy something (for yourself or someone else) but it costs more than you can get in **one month**.

How would you go about getting the money for the thing you want to buy?

| When I want to buy something for myself that is too expensive for me to buy with the money I can get in ONE month, I... | Would certainly not do this | Very unlikely to do this | Unlikely to do this | Would possibly do this | Likely to do this | Very likely to do this | Would certainly do this |
|--|-----------------------------|--------------------------|---------------------|------------------------|-------------------|------------------------|-------------------------|
| ... ask my parents/step-parents whether they would buy it for me | | | | | | | |
| ... go out / into town less often | | | | | | | |
| ... think about my savings and whether I would want to dig into them | | | | | | | |
| ... try to negotiate with my parents/step-parents | | | | | | | |
| ... sell things (i.e. toys, game boy, mobile phone, etc.) to friends | | | | | | | |
| ... start saving | | | | | | | |
| ... take on a Saturday-job or a paper-round | | | | | | | |
| ... ask for more shifts at work | | | | | | | |
| ... do more work at home in order to earn some extra-money | | | | | | | |
| ... stop spending money on some of the things I usually buy | | | | | | | |
| ... sell toys and things I could do without at a car boot sale | | | | | | | |
| ... calculate how long it would take me to save up for it | | | | | | | |
| ... buy cheaper things | | | | | | | |
| ... sell things (i.e. toys, game boy, mobile phone, etc.) to a second hand shop | | | | | | | |
| ... ask my parents/step-parents for more money and pay them back later | | | | | | | |
| ... other (please explain): | | | | | | | |

Appendix 10: Questionnaire Pilot Study 3



| | | | | |
|---------------|------|--|--|--|
| QUESTIONNAIRE | CODE | | | |
|---------------|------|--|--|--|

How old are you? _____ years.
 Are you a boy or a girl? boy girl

Please read the following statements carefully. Take your time for each one and tick the box that best describes YOU.

| Statement | Not at all like me | Not like me | Half like me | Like me | Very much like me |
|--|--------------------|-------------|--------------|---------|-------------------|
| I often work on things that will only pay off in a couple of years. | | | | | |
| I only care about what happens today or tomorrow, because I think that things in the future will work themselves out ok. | | | | | |
| I only think about the short-term consequences of what I do (say a period of a couple of hours or days). | | | | | |
| I usually take the easy option when making decisions. | | | | | |
| I don't care about warnings of problems in the future, because I think things will work out ok before they get too bad. | | | | | |
| There is no need to miss out on fun now just to avoid problems in the future; they can be solved later. | | | | | |
| I only care about the here and now, future problems can wait. | | | | | |
| Things I do every day that I can immediately see the outcomes of are more important to me than things where I have to wait a long time to see the outcome. | | | | | |

The next question has to do with saving money.

| How do you stop yourself from spending money when you are trying to save up for something? I ... | Would certainly not do this | Very unlikely to do this | Unlikely to do this | Would possibly do this | Likely to do this | Very likely to do this | Would certainly do this |
|---|-----------------------------|--------------------------|---------------------|------------------------|-------------------|------------------------|-------------------------|
| ... give my money to my mum or someone else to look after. | | | | | | | |
| ... give my bank card to mum or someone else. | | | | | | | |
| ... leave money or bank card at home. | | | | | | | |
| ... leave part of it at home. | | | | | | | |
| ... leave all of it at home. | | | | | | | |
| ... put all my money in my money box. | | | | | | | |
| ... make my mum or someone else put it in my bank account. | | | | | | | |
| ... hide my money and/or bank card. | | | | | | | |
| ... put my money in my bank account. | | | | | | | |
| ... try to forget about my money. | | | | | | | |
| ... limit myself, try to budget. | | | | | | | |
| ... don't break into large notes. | | | | | | | |
| ... use will-power, control myself. | | | | | | | |
| ... concentrate on what I'm saving for. | | | | | | | |
| ... avoid shops and places that involve money, look away. | | | | | | | |
| ... go and look at what I'm saving for, as often as possible. | | | | | | | |
| ... do something else to distract myself. | | | | | | | |
| Other (please explain) _____ | | | | | | | |

I would also like you to describe yourself using the opposites below. Tick the circle that YOU think best describes you. If you think you have both qualities equally, tick the circle in the middle.

| quality | very much like me | like me | a little like me | half like me | a little like me | like me | very much like me | quality |
|-----------------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------------|
| easily worried | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | not easily worried |
| taking little care | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | taking lots of care |
| not disciplined | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | disciplined |
| anxious | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | carefree |
| sticking to your principles | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | not sticking to your principles |
| self-controlled | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | not self-controlled |

Some people are thinking about their future a lot and some don't. Also, people differ when it comes to planning work and leisure activities. Please read the following statements carefully and indicate how strongly you agree with each statement.

| Statement | Strongly disagree | disagree | Neither agree nor disagree | agree | Strongly agree |
|--|-------------------|----------|----------------------------|-------|----------------|
| I believe that a person's day should be planned ahead each morning. | | | | | |
| I do things spontaneously. | | | | | |
| When I want to achieve something, I set goals and think about different ways of reaching them. | | | | | |
| Doing what's necessary for tomorrow comes before what's fun today. | | | | | |
| I try to get as much as I can out of life, every day. | | | | | |
| I'm always late. | | | | | |
| I don't like being late when I meet up with friends. | | | | | |
| I sometimes plan things to do in a weekend that's 2 weeks ahead. | | | | | |
| I only meet up with friends when my homework is completed. | | | | | |
| I always stick to my plan. | | | | | |
| I usually think of birthday presents for my friends at least a week ahead. | | | | | |
| I do what I should do for teachers on time. | | | | | |
| I make decisions as they come. | | | | | |
| I generally don't like being late. | | | | | |
| I take each day as it comes instead of making plans. | | | | | |
| I like my life to be exciting. | | | | | |
| Taking risks makes my life less boring. | | | | | |
| It is more important for me to have fun now than to focus on future outcomes. | | | | | |
| I usually leave things until the last minute. | | | | | |
| I make lists of things to do. | | | | | |
| I often follow my heart more than my head. | | | | | |
| I am able to resist temptation when I know that there is work to be done. | | | | | |
| I do what I should do for friends on time. | | | | | |
| I'm a planner. | | | | | |
| I favour friends who are spontaneous rather than predictable. | | | | | |
| I don't give up when things get difficult or boring. | | | | | |

THANK YOU!

Appendix 11: Original and amended items of the Zimbardo Time Perspective Scale

Future Time Perspective (Zimbardo & Boyd, 1999)

| Original items: | Amended items (rephrased version): |
|---|---|
| I believe that a person's day should be planned ahead each morning. | I believe that a person's day should be planned ahead each morning. |
| When I want to achieve something, I set goals and consider specific means for reaching those goals. | When I want to achieve something, I set goals and think about different ways of reaching them. |
| Meeting tomorrow's deadlines and doing other necessary work comes before tonight's play. | Doing what's necessary for tomorrow comes before what's fun today. |
| It upsets me to be late for appointments. | (a) I don't like being late when I meet up with friends. (b) I generally don't like being late. |
| I meet my obligations to friends and authorities on time. | (a) I do what I should do for friends on time. (b) I do what I should do for teachers on time. |
| I take each day as it is rather than try to plan it out.. | I take each day as it comes instead of making plans. |
| I complete projects on time by making steady progress. | I usually leave things until the last minute. |
| I make lists of things to do. | <i>Same as original</i> |
| I am able to resist temptation when I know that there is work to be done. | I am able to resist temptation when I know that there is work to be done. |
| I keep working at difficult, uninteresting tasks if they will help me get ahead. | I don't give up when things get difficult or boring. |

Present (hedonistic) time perspective

| Original items: | Amended items (rephrased version): |
|--|---|
| I do things impulsively. | I do things spontaneously. |
| I try to live my life as fully as possible, one day at a time. | I try to get as much as I can out of life, every day. |
| I make decisions on the spur of the moment. | I make decisions as they come. |
| It is important to put excitement in my life. | I like my life to be exciting. |
| Taking risks keeps my life from becoming boring. | Taking risks makes my life less boring. |
| It is more important for me to enjoy life's journey than to focus only on the destination. | It is more important for me to have fun now than to focus on future outcomes. |
| I often follow my heart more than my head. | <i>Same as original</i> |
| I prefer friends who are spontaneous rather than predictable. | I favour friends who are spontaneous rather than predictable. |

Appendix 12: Original and amended items of the Consideration of Future Consequences Scale

Consideration of Future Consequences Scale (Strathman et al., 1994)

| Original items: | Amended items (rephrased version): |
|--|--|
| Often I engage in a particular behaviour in order to achieve outcomes that may not result for many years. | I often work on things that will only pay off in a couple of years. |
| I only act to satisfy immediate concerns, figuring the future will take care of itself. | I only care about what happens today or tomorrow, because I think that things in the future will work themselves out ok. |
| My behaviour is only influenced by immediate (i.e. a matter of days or weeks) outcomes of my actions. | I only think about the short-term consequences of what I do (say a period of a couple of hours or days). |
| My convenience is a big factor in the decisions I make or the actions I take. | I usually take the easy option when making decisions. |
| I generally ignore warnings about possible future problems because I think the problems will be resolved before they reach crisis level. | I don't care about warnings of problems in the future, because I think things will work out ok before they get too bad. |
| I think that sacrificing now is usually unnecessary since future outcomes can be dealt with at a later time. | There is no need to miss out on fun now just to avoid problems in the future; they can be solved later. |
| I only act to satisfy immediate concerns, figuring that I will take care of future problems that may occur at a later time. | I only care about the here and now, future problems can wait. |
| Since my day to day work has specific outcomes, it is more important to me than behaviour that has distant outcomes. | Things I do every day that I can immediately see the outcomes of are more important to me than things where I have to wait a long time to see the outcome. |

Appendix 13: Questionnaire Study 3



| | | | | |
|-----------------------|------|---|------|--|
| STUDENT QUESTIONNAIRE | CODE | 9 | QECC | |
|-----------------------|------|---|------|--|

GENERAL INFORMATION

How old are you? _____ years

Are you a boy or a girl? boy girl

How many brothers or sisters do you have? Brother(s) Sister(s). Please give all their ages: years old.

Do you get pocket money/an allowance? yes no

How much money do you GET FROM YOUR PARENTS (step-parents/ guardians) **on average each month**? £ _____

Is your pocket money/ allowance dependent on you doing household chores? Yes, entirely. Yes, partly. No, not at all.

Do you sometimes do small jobs at home (i.e. washing cars) to earn extra money from your parents (step-parents/ guardians)? yes no

Do you sometimes do little jobs for people other than your parents (step-parents/ guardians) for which you get paid (for example, washing cars for neighbours, babysitting)? yes no

Do you have any out of school-hours employment, for which you are paid (like a paper round, or Saturday-job)? yes no

How much money do you EARN **on average each month**? £ _____

SECTION 1 - GENERAL MONEY MANAGEMENT

1. What do you usually do with your pocket money / allowance? I don't get pocket money/ an allowance

save all of it save most of it save some and spend some spend most of it spend all of it

2. What do you usually do with the money you earn? I don't earn money

save all of it save most of it save some and spend some spend most of it spend all of it

3. When I get pocket money, I usually I don't get pocket money/an allowance

| | | | | |
|---|---|--|---|--|
| <input type="checkbox"/> Spend it carefully, so that I always have some left. | <input type="checkbox"/> Make sure I can spend a little bit every day until I get more. | <input type="checkbox"/> Spend some of it every day until I run out. | <input type="checkbox"/> Spend all of it within a few days. | <input type="checkbox"/> Spend all of it within one day. |
|---|---|--|---|--|

4. How do you deal with your money in general?

| | | | | |
|--|---|---|--|--|
| <input type="checkbox"/> keep as much as I can | <input type="checkbox"/> spend it carefully | <input type="checkbox"/> spend some and save some | <input type="checkbox"/> spend it easily | <input type="checkbox"/> spend it easily and quickly |
|--|---|---|--|--|

5. Read the statements below carefully and tick the box that shows how much you agree or disagree with them.

| Statement | Strongly disagree | disagree | Neither agree nor disagree | agree | Strongly agree |
|--|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| I like spending money. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I'm good at saving. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I usually give into temptation. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Activities I do in my free time usually involve spending money. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I meet up with my friends we regularly spend money. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Life is expensive. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I need a lot of money for all the things I do (i.e. going out, hobbies, sport, etc). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

6. The following three questions are about how well-off you think you are compared to your best friends.
- a) With regard to the money my parents give to me, I think in comparison to my best friends, I get
 ... a lot less ... a little less ... about the same ... a little bit more a lot more
 I don't get pocket money/an allowance
- b) With regard to the money I earn, I think in comparison to my best friends, I earn
 ... a lot less ... a little less ... about the same ... a little bit more a lot more
 I don't earn money (myself).
- c) With regard to the money we as family have, I think in comparison to my best friends' families we have..
 ... a lot less ... a little less ... about the same ... a little bit more a lot more
7. How often do you argue about money matters with your parents (step-parents/ guardians)?
 never rarely sometimes often always

SECTION 2 - GETTING LARGE SUMS OF MONEY

Sometimes you might find that you want to buy something for yourself but it costs more than you can get in **one month**. How would you go about getting the money for the thing you want to buy?

| When I want to buy something for myself that is too expensive for me to buy with the money I can get in ONE month, I... | Would certainly not do this | Very unlikely to do this | Unlikely to do this | Would possibly do this | Likely to do this | Very likely to do this | Would certainly do this |
|---|-----------------------------|--------------------------|-----------------------|------------------------|-----------------------|------------------------|-------------------------|
| ... ask my parents/step-parents whether they would buy it for me | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... go out / into town less often | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... think about my savings and whether I would want to dig into them | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... try to negotiate with my parents/step-parents | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... sell things (i.e. toys, game boy, mobile phone, etc.) to friends | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... start saving | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... take on a Saturday-job or a paper-round | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... ask for more shifts at work | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... do more work at home in order to earn some extra-money | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... stop spending money on some of the things I usually buy | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... sell toys and things I could do without at a car boot sale | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... calculate how long it would take me to save up for it | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... buy cheaper things | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... sell things (i.e. toys, game boy, mobile phone, etc.) to a second hand shop | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... ask my parents/step-parents for more money and pay them back later | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... other (please explain): | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

SECTION 3 – MORE QUESTIONS ABOUT YOURSELF

1. I would also like you to describe YOURSELF using the statements below. Tick the box that shows how true each statement is for you.

| Statement | Not at all like me | Not like me | Somewhat like me | Like me | Very much like me |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I am always prepared. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I leave my belongings around. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I pay attention to details. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I like order. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often forget to put things back in their proper place. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I get chores done right away. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am exacting in my work. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I follow a schedule. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I make a mess of things. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I shirk my duties. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

2. Read the statements below carefully and tick the box to show how characteristic each of them is of you.

| Statement | Not at all like me | Not like me | Somewhat like me | Like me | Very much like me |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I believe that a person's day should be planned ahead each morning. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I do things spontaneously. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I want to achieve something, I set goals and think about different ways of reaching them. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Doing what's necessary for tomorrow comes before what's fun today. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I try to get as much as I can out of life, every day. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I don't like being late when I meet up with friends. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I do what I should do for teachers on time. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I make decisions as they come. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I generally don't like being late. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I take each day as it comes instead of making plans. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I like my life to be exciting. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Taking risks makes my life less boring. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| It is more important for me to have fun now than to focus on future outcomes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I usually leave things until the last minute. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I make lists of things to do. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often follow my heart more than my head. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am able to resist temptation when I know that there is work to be done. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I do what I should do for friends on time. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I favour friends who are spontaneous rather than predictable. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I don't give up when things get difficult or boring. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

3. Young people can do a variety of things to stop themselves from spending money when they are trying to save up for something. Some are quite easy while others can actually be difficult. How confident are you that you can do any of the following to stop yourself from spending too much?

| How well can you ... | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
|---|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|
| .. avoid shops and places that involve money? | not very well | a little | somewhat | quite well | very well |
| .. limit yourself, budget? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| .. not break into large notes? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| .. use will-power? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| .. control yourself? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| .. concentrate on what you are saving for? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| .. only carry some of your money with you? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| .. wait until an item you'd like to buy is on sale? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| .. stick to your plan? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| .. not take money out of your bank account? | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

4. Read the statements below carefully and tick the box that shows how much you agree or disagree with them.

| Statement | Strongly disagree | disagree | Neither agree nor disagree | agree | Strongly agree |
|---|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| I don't manage to save up for something that would imply saving for longer than one month. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I save because saving is a good thing to do. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| By saving you can impress others. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I don't need to save because my parents buy me the things I like, even if these are expensive. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I don't like it when my parents ask me what I do with my money. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I save because it gives me a feeling of security. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I get money, I always spend it immediately (within 1 or 2 days). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Managing to save makes me feel proud of myself. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I don't save because the money my parents give to me is for spending. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think I have the right to do whatever I want with my money, especially when I earn it myself. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I don't need to save up for anything because my parents buy me the things I like. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think saving money is not necessary as long as you live at home and your parents support you financially. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I regularly put money in a savings account. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I don't save because I think it's too hard. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think you can be proud when you manage to save for something really expensive. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

5. Read the statements below carefully and tick the box that shows how much you agree or disagree with them.

| Statement | Strongly disagree | disagree | Neither agree nor disagree | agree | Strongly agree |
|---|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| I don't need to save because my parents give me more money than I usually spend. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think it's a good thing to ask your parents to keep hold of your money/cash card sometimes, to help you save. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think its good when parents control your spending. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Saving is something one should learn when little. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Saving is for adults. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I don't like saving because I think saving makes you think about money too much. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents are proud of me for saving. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I appreciate it when my parents give me advice about what to do with my money. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I save money because I think one should not spend it unnecessarily. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Saving is easy. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I don't save money but try to get more money out of my parents. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think parents should help you with your money-management. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think people of my age should not need to save money. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think parents should control their children's money management. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Pocket money is there to be spent. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

SECTION 4 – SOME QUESTIONS ABOUT YOUR FAMILY

Every family is different, just like every adolescent is too. Whether you keep your parents up to date with what you do or think and whether your parents are able to understand what is going on for you might perhaps seem to change from day to day. Please take your time to read through these final statements and indicate how true **in general** each of them is, for you and your family.

1. How often do the following things happen in **your family**?

| | Never | Rarely | Sometimes | Often | Always |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| When someone in my family goes out or comes home, they tell other family members in the house. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I get a poor grade in school, my parents (step-parents/ guardians) encourage me to try harder. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

2. How often do the following things happen in **your family**?

| | Never | Rarely | Sometimes | Often | Always |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I can count on my father (step-father/ guardian) to help me out, if I have some kind of problem. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My mother (step-mother/ guardian) helps me with my schoolwork if there is something I don't understand. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I can easily talk with my mother (step-mother/ guardian) about all kinds of things. I can trust her and I like it when she trusts me. She is involved in my life as much as I want. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I can easily talk with my father (step-father/ guardian) about all kinds of things. I can trust him and I like it when he trusts me. He is involved in my life as much as I want. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I get a poor grade in school, my parents (step-parents/ guardians) propose to help me. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents (step-parents/ guardians) spend time just talking with me. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My father (step-father/ guardian) helps me with my schoolwork if there is something I don't understand. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If I get a good grade in school, my parents (step-parents/ guardians) praise me. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My family does something fun together. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I can count on my mother (step-mother/ guardians) to help me out, if I have some kind of problem. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents (step-parents/ guardians) keep pushing me to do my best in whatever I do. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When my parents (step-parents/ guardians) want me to do something, they explain why. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I get a poor grade at school, my parents (step-parents/ guardians) encourage me to try harder. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

3. When you are out with your friends, in a typical week what is the latest you can stay out on school nights (Mon – Thurs)?

- I'm not allowed out before 8.00 after 8.00 but before 9.00
 after 9.00 but before 10.00 after 10.00 but before 11.00 after 11.00 as late as I want

4. When you are out with your friends, in a typical week what is the latest you can stay out on Friday or Saturday Night?

- I'm not allowed out before 9.00 after 9.00 but before 10.30
 after 10.30 but before 12.00 after 12.00 but before 1.30 after 1.30 as late as I want

5. How much do your parents (step-parents/ guardians)

| TRY to know ... | Don't try | Try a little | Try somewhat | Try a lot | Try a very great amount |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-------------------------|
| ... where you go at night? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... what you do with your free time? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... where you are most afternoons after school? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... who your friends are? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... how you spend your money? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

6. How much do your parents (step-parents/ guardians)

| REALLY know ... | Don't know | Know a little | Know some | Know a lot | Know a very great amount |
|---|-----------------------|-----------------------|-----------------------|-----------------------|---------------------------------|
| ... where you go at night? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... what you do with your free time? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... where you are most afternoons after school? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... who your friends are? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| ... how you spend your money? | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

7. How often do the following things happen in **your family**?

| | Never | Rarely | Sometimes | Often | Always |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| My parents (step-parents/ guardians) emphasize that every member of the family should have some say in family decisions. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents (step-parents/ guardians) won't let me do things with them when I do something they don't like. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents (step-parents/ guardians) say that you should always look at both sides of the issue. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents (step-parents/ guardians) keep pushing me to think independently. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I get a poor grade at school, my parents (step-parents/ guardians) make me feel guilty. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents (step-parents/ guardians) talk at home about things like politics or religion, where one takes a different side from others. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents (step-parents/ guardians) tell me that their ideas are correct and I shouldn't question them | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents (step-parents/ guardians) let me make my own plans for things I want to do. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents (step-parents/ guardians) emphasize that I shouldn't argue with adults. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I get a good grade, my parents (step-parents/ guardians) give me more freedom to make my own decisions. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents (step-parents/ guardians) answer my arguments by saying something like "You'll know better when you grow up." | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents (step-parents/ guardians) act cold and unfriendly if I do something they don't like. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I get a good grade at school, my parents (step-parents/ guardians) say my other grades should be as good. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents (step-parents/ guardians) say that I should give in on arguments rather than make people angry. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents (step-parents/ guardians) emphasize that it is important to get my ideas across even if others don't like it. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My parents (step-parents/ guardians) admit that I know more about some things than adults do. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

THANK YOU !

Appendix 14: Reminder letter

MONEY MANAGEMENT PROJECT A REMINDER!



Dear Parent,

The deadline for the prize draw and cinema vouchers is **11th MARCH 2005**. This means that if you haven't filled in your questionnaire yet, you can still do it. Remember, if you win our **1st prize**, your family might go on a **CenterParcs weekend trip** or if you win the **2nd or 3rd prize**, the whole family will be able to **watch a movie together!**

Thank you to all the families who have taken part already! Your participation is highly appreciated.

Good luck for the prize draw!

Kindest regards,
Annette Otto

Appendix 15: Personalised reminder letter

MONEY MANAGEMENT PROJECT



Dear Parent,

I am writing to you because set is incomplete (see below). We have postponed the prize draw as a few families have one or two questionnaires missing.

PARENT QUESTIONNAIRE MISSING GRANDPARENT QUESTIONNAIRE MISSING MISUNDERSTANDING OTHER

HOW CAN YOU HELP COMPLETE SET?

- Complete the questionnaire attached about you and your child.
- Return it to the University (using the freepost envelope enclosed) as soon as possible.
- Forward the yellow questionnaire and the freepost envelope to the child's paternal grandmother using the blank stamped envelopes.

Thank you very much for your cooperation, time and effort.

Kindest regards,

Annette Otto

MONEY MANAGEMENT PROJECT



Dear Grandparent,

I am writing to you because set is incomplete (see below). We have postponed the prize draw as a few families have one questionnaire missing.

HOW CAN YOU HELP COMPLETE SET?

- Complete the questionnaire attached about you and your grandchild.
- Return it to the University (using the freepost envelope enclosed) as soon as possible.

Thank you very much for your cooperation, time and effort.

Kindest regards,

Annette Otto

Appendix 16: Reminder poster

MONEY MANAGEMENT PROJECT A REMINDER!



DEAR STUDENT,

If your parents haven't filled in their questionnaires yet, they can still do it!

DEADLINE for the **prize draw & cinema vouchers** is **11th MARCH 2005**.

If you win our **1st prize**, your family might go on a **CenterParcs WEEKEND TRIP**.

If you win the **2nd or 3rd prize**, your family will be able to **WATCH A MOVIE TOGETHER**.

Good luck for the prize draw!

ANNETTE OTTO

Appendix 17: Questionnaire Study 4 (parents)



| | | | | |
|----------------------|------|---|------|--|
| PARENT QUESTIONNAIRE | CODE | 9 | QECC | |
|----------------------|------|---|------|--|

GENERAL INFORMATION

- What is your gender? Male Female
- What is your age? years.
- What is your relationship with the child taking part in this study?
 mother stepmother father stepfather guardian other: _____
- Which of the following options BEST describes YOUR CURRENT situation?
 in paid/self employment (full-time) in paid/self employment (part-time) unemployed retired
 looking after family or home student (full/ part-time) long term sick or disabled
 other (please specify) _____
- Please tick the highest level of education you have completed.
 no formal qualification GCSE/CSE/O-Level A-Level (or equivalent) professional/ vocational
 university first degree (e.g. BA, BSc or BEd) university higher degree (e.g. MSc PhD) other (please specify) _____
- How many children do you have? child(ren)
- How many children are living in your household? child(ren)
- What is your current legal marital status?
 Single Cohabiting Married Separated Divorced Widowed
- If you are living with your partner/ spouse, how long have you, your partner and the child taking part in this study been living together in one household? For years. I'm not living with a partner/ spouse.

SECTION 1 - YOUR CHILD'S INCOME

- Do you give money to your child REGULARLY (pocket money/ an allowance)? yes no (go to question 8)
- How much money do you give and how often? £ once a week once a fortnight once a month
- Do you usually manage to hand it out on the same day? never rarely sometimes often always
- Is this pocket money/ allowance transferred directly to your child's bank account? yes no
- Is the pocket money/ allowance dependent on your child doing household chores?
 Yes, entirely. Yes, partly. No, not at all.
- Have you and your child agreed in advance, what pocket money/ the allowance should be used for? yes no
- What do you expect your child to use her/his pocket money/ allowance for?
 school clothes clothes holiday spending presents lunch drinks cinema
 going out hobbies meals with friends mobile phone sport transportation
 anything s/he likes other (please specify): _____
- How do you think your child should organise her/his pocket money/ allowance?
 Part of my child's allowance is withheld and put in a savings account for her/him.
 I expect my child to *regularly save a fixed percentage* of the allowance (pocket money)
 I encourage my child to *regularly save some* of the allowance (pocket money)
 I encourage my child to *save a bit* of the allowance (pocket money)
 I leave it up to my child to decide whether s/he saves any money
 My child doesn't get pocket money/ an allowance

9. Do you IRREGULARLY give money to your child (either solely irregular money or in addition to regular pocket money)? yes no (go to question 13)

10. What do you expect your child to use this (extra) money for?

school clothes clothes holiday spending presents lunch drinks cinema
 going out hobbies meals with friends mobile phone sport transportation
 anything s/he likes other (please specify): _____

11. How much money do you give irregularly **on average each month** to your child? £

12. Is this irregular money dependent on your child doing household chores?

Yes, entirely. Yes, partly. No, not at all.

13. Does your child have the opportunity to do small jobs at home (i.e. washing cars) to earn extra money? yes no

14. Do you sometimes reduce your child's pocket money/ allowance when chores have not been carried out?

yes no

15. Who is mainly involved with your child's pocket money/ allowance?

I deal with the money my child gets My husband/wife/partner deals with this

16. Have you ever arranged for your child to have a piggy bank/ moneybox?

Yes, when s/he was yrs. No (go to Q 18)

17. Did your child use this piggy bank/ moneybox? never rarely sometimes often always

18. Has your child access to a bank account where money can be deposited and withdrawn? yes no (go to Q 21)

19. When did you open the account? When my child was years old.

20. Was your child with you in the bank when you opened the account? yes no

21. Have you opened a savings account for your child? yes no

22. Would you encourage your child to earn money out of school-hours (paper round, Saturday job)? yes no

23. Does your child have any out of school-hours employment for which s/he gets paid? yes no

SECTION 2 – POCKET MONEY MANAGEMENT

1. Some parents consider the money they give to their child spending money. Others think that children should learn to save when young. Listed below are a number of ways in which a parent could help a child manage money or save up for something. Please indicate whether you have done any of these in the past or whether you do any of these at the moment. Please answer this as honestly as you can. If you read something you consider a good thing to do but you have not done it (yet), then please tick 'never'.

| Statement | No, never | Yes, but rarely | Yes, sometimes | Yes, often | Yes, most of the time |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I encourage my child to tell me how s/he spends her/his money | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I encourage my child not to touch her savings until sometime in future. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I volunteer to make deposits for my child (during school hours). | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I look after my child's money (or bank card) when s/he wants me to. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I remind my child that sometime in future s/he will appreciate having saved. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I talk about ways to limit spending. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I help my child differentiate between things s/he really needs and things s/he wants. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I take her/him to the bank to deposit her/his savings together. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I talk about things s/he might want to spend more money on when s/he is a bit older. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I remind her/him of her/his current saving goal when new ideas for spending come up. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

| Statement | No, never | Yes, but rarely | Yes, sometimes | Yes, often | Yes, most of the time |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I put some money towards things my child has her/his heart set on, provided that my child pays or saves some money towards it. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I talk about her/his bank statements. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I restrict my child's spending. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I help my child calculate how long s/he would have to save up for something | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I monitor my child's spending behaviour. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I provide pocket money in advance. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I argue with my child about money. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I lend money to my child when s/he needs it. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| If I lend money to my child, I turn a blind eye when it comes to them paying me back. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My child and I review her/his spending. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I suggest activities that don't involve spending money. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I encourage my child to plan her/his saving. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I suggest avoiding shops and places that involve money. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I encourage my child to keep track of her/his expenditures. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I manage to be consistent in the rules we have set up around money matters | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

2. Read the statements below carefully and tick the box that shows how much you agree or disagree with them. Again, it is important that you do this as honestly as possible.

| Statement | Strongly disagree | disagree | Neither agree nor disagree | agree | Strongly agree |
|---|-----------------------|-----------------------|----------------------------|-----------------------|-----------------------|
| I think it is not necessary for children to save money as long as they live at home and are financially supported by their parents. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think parents should not let their child spend money unnecessarily. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think people as young as my child should not need to save money. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think my child can be proud when s/he manages to save for something really expensive. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Saving is something one should learn when little. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am proud of my child for saving. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I try to demonstrate good financial management for my child in the handling of my own finances. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| By saving money myself, I set an example for my child. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When pocket money is given in advance, I sometimes turn a blind eye when it comes to the next lot that should not be paid to her/him. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My child doesn't need to save up for anything because I buy her/him the things s/he likes. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| The money I give to my child is for spending. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My child doesn't need to save because I give her/him more money than s/he usually spends. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I don't want my child to worry about money, so I make sure s/he always has enough on her/him. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Saving is for adults. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think parents should help their child with money-management. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Children should save money because it is a good thing to do. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My child appreciates it when I give her/him advice about what to do with her/his money. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| My child doesn't like it when I ask her/him what s/he does with her/his money. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I think my child has the right to do whatever s/he wants to do with her/his money, especially when s/he earns it herself/himself. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

SECTION 3 – THINK ABOUT YOURSELF

3. I would also like you to describe YOURSELF using the statements below. Tick the box that shows how true each statement is for you.

| Statement | Not at all like me | Not like me | Somewhat like me | Like me | Very much like me |
|--|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I am always prepared. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I leave my belongings around. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I pay attention to details. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I like order. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often forget to put things back in their proper place. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I get chores done right away. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am exacting in my work. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I follow a schedule. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I make a mess of things. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I shirk my duties. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

4. Read the statements below carefully and tick the box to show how characteristic each of them is of you.

| Statement | Not at all like me | Not like me | Somewhat like me | Like me | Very much like me |
|---|-----------------------|-----------------------|-----------------------|-----------------------|-----------------------|
| I believe that a person's day should be planned ahead each morning. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I do things impulsively. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| When I want to achieve something, I set goals and consider specific means for reaching those goals. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Meeting tomorrow's deadlines and doing other necessary work comes before tonight's play. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I try to live my life as fully as possible, one day at a time. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| It upsets me to be late for appointments. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I meet my obligations to friends and authorities on time. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I make decisions on the spur of the moment. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I take each day as it is rather than try to plan it out. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| It is important to put excitement in my life. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| Taking risks keeps my life from becoming boring. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| It is more important for me to enjoy life's journey than to focus only on the destination. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I complete projects on time by making steady progress. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I make lists of things to do. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I often follow my heart more than my head. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I am able to resist temptation when I know that there is work to be done. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I prefer friends who are spontaneous rather than predictable. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |
| I keep working at difficult, uninteresting tasks if they will help me get ahead. | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> | <input type="radio"/> |

SECTION 4 – YOUR CHILDHOOD

In the following questions you should think of the phase parent(s)/guardian as the people who bought you up so it could be your parents, step-parents, grandparents, guardians. The next few questions are about your childhood. Recollecting the past can be difficult, please take a moment to think back to when you were a child and then do your best to answer the questions as accurately as possible.

When you were between 8-11...

1. Did your parent(s)/ guardian give you pocket money (a standard amount of money on a regular basis)?
 Yes Yes, but it was sometimes forgotten Occasionally No
2. Did you sometimes do small jobs at home (for example, cleaning) to earn money from your parents?
 never rarely sometimes often always
3. Did you sometimes do small jobs for other people other than your parents (for example, babysitting) to earn money? never rarely sometimes often always
4. Could you spend your money as you wished?
 My parent(s)/ guardian controlled all the things I spend my money on
 My parent(s)/ guardian controlled most of the things I spend my money on
 I could spend some of my money in the way I wished and my parents controlled the rest
 I could spend most of my money the way I wished
 I could spend all of my money the way I wished
 I did not have any money of my own

The next set of questions ask you about the period when you were a little older.

When you were between 12-16...

5. Did your parent(s)/ guardian give you pocket money (a standard amount of money on a regular basis)?
 Yes Yes, but it was sometimes forgotten Occasionally No
5. Did you sometimes do small jobs at home (for example, cleaning) to earn money from your parents?
 never rarely sometimes often always
6. Did you sometimes do small jobs for people other than your parents (for example, babysitting) to earn money?
 never rarely sometimes often always
7. Did you have any out of school-hours employment for which you were paid (like a Saturday job or paper round)?
 Yes, I had many part-time jobs throughout this period
 Yes, I had a few part-time jobs throughout this period
 Yes, I had just one such job throughout this period
 No, I never had any such jobs
8. Did your parents try to give you advice on what to do with your money?
 Yes, they gave me lots of advice and practical help
 Yes, they gave me some advice and help
 Yes, but only to a limited extent
 No
9. Did your parents try to encourage you to save?
 Yes, they emphasized the necessity of saving
 Yes, they told me how important saving is
 Yes, but only to a limited extent
 No
6. Could you spend your money as you wished?
 My parent(s)/ guardian controlled all the things I spend my money on
 My parent(s)/ guardian controlled most of the things I spend my money on
 I could spend some of my money in the way I wished and my parents controlled the rest
 I could spend most of my money the way I wished
 I could spend all of my money the way I wished
 I did not have any money of my own

10. Some people spend all their money immediately. Others save some money in order to have something left to fall back on. Please indicate what you used to do with your pocket money/earnings **when you were between 12-16**.

| | | | | |
|--|---|--|--|--|
| <input type="checkbox"/> kept as much as I can | <input type="checkbox"/> spent it carefully | <input type="checkbox"/> spent some and saved some | <input type="checkbox"/> spent it easily | <input type="checkbox"/> spent it easily and quickly |
|--|---|--|--|--|

11. **When you were between 12-16**, did you find it difficult to control your spending?

Yes, it was very difficult No, it was very easy.

SECTION 5 – GENERAL MONEY MANAGEMENT

1. Would you say your total (household) income is much less than you need, somewhat less than you need, about what you need, somewhat more than you need or much more than you need?

much less somewhat less about right somewhat more much more

2. Which of the following best describes your household:

| | | | | | |
|---|--|---|--|---|--|
| <input type="checkbox"/> We do not save and usually spend more than our income. | <input type="checkbox"/> We do not save and usually spend all of our income. | <input type="checkbox"/> We do not really save, but usually there is some money left over at the end of the year. | <input type="checkbox"/> We save what is left at the end of the month, but have no definite saving plan. | <input type="checkbox"/> We only save extra income we get but spend all the regular income. | <input type="checkbox"/> We save regularly by putting aside money every month. |
|---|--|---|--|---|--|

3. What is the financial situation of your household at the moment?

| | | | | |
|---|--|--|---|---|
| <input type="checkbox"/> We are in debt | <input type="checkbox"/> We are drawing on our savings | <input type="checkbox"/> We can just about manage. | <input type="checkbox"/> We can save some money | <input type="checkbox"/> We can save a lot of money |
|---|--|--|---|---|

4. Did you save any money during the last 12 months? yes no

5. Are you planning to save any money during the next 12 months? yes no

6. Some people spend all their money immediately. Others save some money in order to have something left to fall back on. Please indicate what you would do with money that is left over having paid for food, rent/mortgage and other necessities.

| | | | | |
|--|---|---|--|--|
| <input type="checkbox"/> keep as much as I can | <input type="checkbox"/> spend it carefully | <input type="checkbox"/> spend some and save some | <input type="checkbox"/> spend it easily | <input type="checkbox"/> spend it easily and quickly |
|--|---|---|--|--|

7. Do you find it difficult to control your spending?

Yes, it's very difficult No, it's very easy.

8. People use different time horizons when they decide what part of their income to spend and what part to save. Which of the following time-horizons is the most important in your household with regard to planning your spending and saving?

next couple of months next year next couple of yrs next 5 to 10 yrs more than 10yrs from now

9. How much is your net household income *per month*, after tax and national insurance contributions have been taken off? (please add together your own and your partner's income)

| | | | |
|--|--|--|--|
| <input type="checkbox"/> less than £ 450 | <input type="checkbox"/> £ 450-£ 700 | <input type="checkbox"/> £ 700-£ 900 | <input type="checkbox"/> £ 900 - £ 1150 |
| <input type="checkbox"/> £ 1150- £ 1400 | <input type="checkbox"/> £ 1400 - £ 1750 | <input type="checkbox"/> £ 1750 - £ 2100 | <input type="checkbox"/> £ 2100 - £ 2550 |
| <input type="checkbox"/> £ 2550 - £ 3250 | <input type="checkbox"/> £ 3250 - £ 5300 | <input type="checkbox"/> £ 5300 + | |

10. Is your accommodation owned by you (with or without a mortgage) rented other (please specify): _____

THANK YOU!

Appendix 18: Parents' practices to encourage saving

Practices to encourage saving behaviour in adolescents

| subscale | item |
|-------------------|---|
| argue-talk | |
| mprs25 | I argue with my child about money |
| mprs29 | I suggest avoiding shops and places that involve money |
| mprs12 | I help my child differentiate between things s/he really needs and things s/he wants |
| mprs10 | I talk about ways to limit spending |
| mprs27 | I suggest activities that don't involve spending money |
| control | |
| mprs20 | I restrict my child's spending |
| mprs3 | I encourage my child not to touch her savings until sometime in future |
| mprs33 | I manage to be consistent in the rules we have set up around money matters |
| mprs2 | I encourage my child to tell me how s/he spends her/his money |
| mprs22 | I monitor my child's spending behaviour |
| encourage | |
| mprs21 | I help my child calculate how long s/he would have to save up for something |
| mprs30 | I encourage my child to keep track of her/his expenditures |
| mprs28 | I encourage my child to plan her/his saving |
| mprs19 | I talk about her/his bank statements |
| mprs26 | My child and I review her/his spending |
| interfere | |
| mprs23 | I provide pocket money in advance |
| mprs34 | I lend money to my child when s/he needs it |
| mprs35 | If I lend money to my child, I turn a blind eye when it comes to them paying me back |
| support | |
| mprs5 | I volunteer to make deposits for my child (during school hours) |
| mprs7 | I look after my child's money (or bank card) when s/he wants me to |
| mprs15 | I remind her/him of her/his current saving goal when new ideas for spending come up |
| mprs16 | I put some money towards things my child has her/his heart set on, provided that my child pays or saves some money towards it |
| mprs13 | I take her/him to the bank to deposit her/his savings together |
| mprs9 | I remind my child that sometime in future s/he will appreciate having saved |
| mprs14 | I talk about things s/he might want to spend more money on when s/he is a bit older |

Appendix 19: Parents' attitudes towards their adolescent child's saving

'Parents' attitudes towards their adolescent child's saving scale'

| subscale | item |
|--|---|
| saving is a good thing | |
| mapsg1 | Children should save money because it is a good thing to do. |
| mapsg3 | Saving is for adults. |
| mapsg5 | I think people as young as my child should not need to save money. |
| mapsg6 | I think parents should not let their child spend money unnecessarily. |
| mapsg7 | I think it is not necessary for children to save money as long as they live at home and are financially supported by their parents. |
| pride | |
| mapsp3 | I think my child can be proud when s/he manages to save for something really expensive. |
| mapsp4 | Saving is something one should learn when little. |
| mapsp5 | I am proud of my child for saving. |
| protect (dependency on parents) | |
| mappd2 | My child doesn't need to save up for anything because I buy her/him the things s/he likes. |
| mappd4 | The money I give to my child is for spending. |
| mappd5 | My child doesn't need to save because I give her/him more money than s/he usually spends. |
| mnew1 | I don't want my child to worry about money, so I make sure s/he always has enough on her/him. |
| mnew6 | When pocket money is given in advance, I sometimes turn a blind eye when it comes to the next lot that should not be paid to her/him. |
| educate (parents as guides) | |
| mappg3 | I think parents should help their child with money-management. |
| mnew2 | I try to demonstrate good financial management for my child in the handling of my own finances. |
| mnew5 | By saving money myself, I set an example for my child. |