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Abstract. Financial literacy has caught the attention of policymakers around the world. A major research programme has been initiated by the World Bank aimed at mapping patterns of financial literacy in developed and developing economies. In this paper, I explain the conceptual foundations of the literacy project, develop a critique of its testing procedures, and suggest that, at the limit, it is an impossible project. At every turn, standard tests of financial literacy dissolve into spatially and temporally specific phenomena undercutting the possibility universality of shared interpretations of notionally common problems. Nonetheless, the literacy mapping project is important for what it reveals about the geographical and socio-demographic patterns of financial knowledge. Further, our research on financial decision-making has been based in part upon a concern for the nature and scope of financial knowledge and understanding in the context of risk and uncertainty. As such, the trick is to anchor financial literacy programmes in ways relevant to everyday life. These arguments are illustrated with reference to the relevant literature, published and unpublished research on financial literacy amongst German residents, and an innovative financial literacy programme that is fine-tuned to people’s circumstances.

Keywords. Financial literacy, cognition, context, information processing, decision-making

JEL Codes. C91, D14, G02, G28

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Introduction

Financial literacy can be defined as knowledge and understanding of the financial products relevant to the issues people must deal with in their everyday lives (see Hood et al. 2009). There are other definitions. Some are more exacting in terms of ‘knowledge and understanding’ while others focus upon the factors that determine whether people are able to realise their financial aspirations (World Bank 2009). Recent research on the map of financial literacy has emphasized socio-demographic status (Lusardi and Mitchell 2008) and state-of-residence (Bumcrot et al. 2011), variations within and between countries including regional differences (Fornero and Monticone 2011) and the rural-urban divide (Klapper and Panos 2011). Seminal papers in geography by Leyshon et al. (2004, 2006) and Fuller and Mellor (2008) note the existence of significant shortfalls in financial literacy in British cities.

Where people make decisions about what to buy, how to pay for what they buy, and how they should spread financial commitments over time, financial literacy is crucial for social welfare. The global financial crisis revealed that many people of modest means based consumption decisions upon expected future income. They became highly geared, mimicking their neighbours by taking advantage of the ‘free’ money offered by credit card vendors and mortgage institutions. There are various explanations for why people joined the leverage game that precipitated the global financial crisis. Lusardi (2010) argued that apparent shortfalls in financial literacy amplified the growth in US consumer debt over the first decade of the 21st century especially amongst those who could ill-afford to do so. By her account, most people lack a rudimentary knowledge of financial principles and do not understand how the use of credit and the assumption of debt can morph into significant threats to their long-term wellbeing.

Unable to manage income against commitments, some people rely upon non-bank bridging devices like payday loans to make good on monthly interest payments (Campbell et al. 2011). Equally pernicious is the use of bank overdrafts as cash balances notwithstanding the transaction charges, the daily interest paid on outstanding balances, and the willingness of banks to go-along this type of behaviour. Closer to home, many British professionals have held together endowment mortgages, money purchase pension schemes, and with-profit insurance policies. When interviewed, few have recognised the risks associated with a triple-exposure to the performance of UK and global financial markets. In a similar manner, when defined contribution pension plan participants take company stock in lieu of company contributions to their pension plans, few seem to appreciate the risks associated with relying on their employer for current and retirement income.
By this account, financial literacy is the means to an end. For critics of neo-liberalism, however, the status attributed to financial literacy reflects larger forces at work in modern societies wherein individuals have been coerced into becoming “financial subjects” (Preda 2009). Writers such as Langley (2008) have argued that ‘financialization’ has discounted the value of shared institutions including social security and workplace pensions. Associated with Anglo-American societies distinguishing, for instance, between continental European traditions and the UK, European pension and labour market reforms have required ordinary citizens to assume greater responsibility for their long-term wellbeing (Clark 2003). This is particularly apparent in Germany. See Burger and Clark (2011) on labour market and pension reforms in the early years of the first decade of the 21st century. The very idea of financial literacy is contested by those who decry financialization. On the other hand, given the costs of the global financial crisis and the ageing of many western societies financial literacy may be a precondition for welfare reform, social cohesion, and individual wellbeing.

In this paper, I explore the logic of financial literacy distinguishing between respondents that test well and those that don’t, and the nature and specification of these tests. This is illustrated by reference to the relevant literature, research in the UK, and unpublished research in Germany. At one level, I am concerned to show that policies that rely upon enabling or empowering individual financial decision-making consistent with the tests of financial literacy assume (explicitly or by default) a theory of information processing that is more normative than it is an adequate representation of the nature and scope of individual behaviour. At another level, I am concerned about how public policy should be framed and implemented given the observed geography of financial literacy and the problems faced when applying ‘solutions’ across societies, and up and down the spatial hierarchy. This is approached with some caution given the scope of the issues, and the fact that any solution must match the situation. Hence, the penultimate section of the paper is more consistent with Massey (2002) than Dorling and Shaw (2002) or Martin (2001).

More broadly, this paper is part of an on-going project to better understand the role and status of the financial services industry with respect to individual and household welfare in modern societies. For some, it is evident that the institutions of collective insurance associated with the post-war settlement in many western societies have practically dissolved the face of changing financial, political, and social imperatives (Pike and Pollard 2010). This has significant implications for continental European societies otherwise believed to be distinctive ‘varieties of capitalism’ (but see Crouch et al. 2009 and Dixon 2008, 2011). Like French et al. (2011), it is argued here that the geography of finance matters: the challenge is to articulate how and why this is the case at different
geographical scales from the global to the local. In this paper, financial literacy is shown to make strong claims upon people’s imagination, including how they conceptualise their place in the global financial system.

**Literacy and Information Processing**

The decline in defined benefit workplace pensions and the rise of defined contribution pensions and individual retirement accounts have placed a premium on individuals’ financial acumen. Lusardi (2008) observes that retirement planning involves decisions that can last a lifetime—mistakes made early in a person’s working career can have far-reaching consequences, because many people are living longer and often rely upon their accumulated earnings for retirement. She suggests "the risk of individuals making costly mistakes in their saving and retirement planning is real" and then immediately links the prospect of making mistakes with "financial illiteracy" (p.3). Further on, Lusardi observes that financial literacy is intimately related to "the effectiveness of financial education programs" (p.9). This is illustrated by the failure of many people to annuitize their accumulated savings upon retirement. In a related study, we show that the UK preference to annuitize is correlated with age, income, and region of residence (Clark et al. 2012).

The connection between financial literacy and financial education matches the connection made in educational psychology between literacy and education. For centuries, literacy has been understood as reading and writing (Garber 2012). Palincsar and Ladewski (2006, p.301) note that literacy has been valued for its contribution to "an intelligent citizenry" as well as (more recently) for its contribution to processing information. They connect literacy with the use of information and communication technologies: "these new literacies allow us to use the Internet and other ICTs to identify important questions, locate information, critically evaluate the usefulness of that information, synthesise information to add to these questions, and then communicate the answers to others" (citing Leu et al. 2004, p.2). Going further, they distinguish three functions associated with literacy including "operational literacy", "cultural literacy", and "critical literacy". The first function concerns processing of information, the second involves interpreting information, while the third involves judging information against *a priori* criteria.\(^1\)

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\(^1\) More generally, Eagleton (2012) argues that what counts as literature depends upon how it is assessed against social norms of value. Inevitably, the assessment process involves judgement and discrimination such that ‘value’ is constructed rather than simply received. In a similar way, the stock and flow of information requires assessment so as to determine its value; that is, information (and literature) is not intrinsically valuable separate from the ways in which we attribute value.
By this account, literacy has an instrumental purpose well-beyond its virtues. What counts as literacy changes as the means by which information is transmitted evolve and change in the face of technological innovation. So, for example, reading and writing can be thought to be basic measures of literacy in Western societies. But it is entirely plausible to suggest that other forms of literacy may be needed if people are to be effective in their everyday lives. In this respect, being technological literate may be more important than having a deep appreciation of the canons of Western thought (Garber 2012). Equally, being financially literate may be important if people are to make informed decisions consistent with their long-term interests. These notions can be joined together. Reading and writing, the use of technology, and knowledge and understanding of financial principles can be united if ‘literacy’ means the processing of information so as to benefit human behaviour whatever its content and the medium through which it is transmitted.

The processing of information is at the heart of contemporary economic theory. It is relevant to theories of firm structure and scope (see Grossman and Helpman 2005), and models of job search behaviour given the existence of spatial and temporal information asymmetries which influence individuals’ labour market prospects and, ultimately, the microeconomics of employment and unemployment (Clark and Whiteman 1983). Economic sociologists have shown how social structure, a person’s location in society including social capital and professional associations, can play a significant role in assembling and processing information (Granovetter 1985). Economic geographers, concerned with explaining the benefits of co-location, emphasise the importance of informal, spatially-dependent networks for the collection and evaluation of information (Storper and Venables 2004; Bathelt and Glückler 2011). One way of conceptualising the form of financial institutions is to focus upon the mechanisms by which information is collected and assessed in the context of risk and uncertainty (Clark and Monk 2013).

Information is unevenly distributed in space and time; consequently, information is costly to acquire and to assess (Gabaix et al. 2006). In these circumstances, being misinformed about market prospects, may give rise to misconceptions about the desirability or otherwise of notionally similar products (Spence 1977). To the extent that offered products are actually bundles of attributes characterised by (concealed) differences in reliability and quality, consumers may not be in a position to appropriately value one option over another. Worse, those that hold information may use it strategically, concealing and revealing information so as to take advantage of their privileged
Buyers and sellers may find it difficult to agree on the terms of exchange, and convergence on an agreed price/quantity may be sub-optimal because of heterogeneous expectations. To the extent that markets lack information-coordinating agencies, the uneven distribution of information may give rise to incomplete markets (Grossman and Stiglitz 1980).

Nonetheless, it is widely observed that financial markets are awash with information (Da, Engelberg, and Gao 2011). There are many channels of information, some entirely public, others semi-public, and still others entirely private. The print media, the Internet and web, social media, and television and video provide daily and up-to-the-minute news, data, and information on market securities virtually cost-free to the public. Less accessible are analysts’ reports, investor briefings on traded securities, and third-party assessments of the significance of the available information. Even here, this information is available at a price to institutional and retail investors. Not publicly available, and far more expensive, are proprietary databases and expert systems for processing this kind of information for underlying patterns and trends. This type of information is particularly valuable for investing against the market and short-term expectations. Sophisticated investors recognise that institutional investors hold the cards including access to privileged information (Clark 2012b).

The stock of information is a crucial factor in framing intentions and determining the effectiveness of behaviour. What people know, don't know, and either can't afford to know or are denied the chance to know by those in a position to exclude them from appropriate information, are all important elements of financial literacy. But, of course, the issue is more complex than this statement would seem to suggest. If we introduce time into the equation such that the flow of information is as important as its stock characteristics, whether people are able to process information in ways consistent with their short-term and long-term welfare will depend upon how they use the stream of information to frame expectations about future ‘states of the world’. In this respect, it is commonly assumed that people assess new information against inherited models or points of reference, update their expectations, and adjust their behaviour accordingly (if they are Bayesian information processors; see Anderson 1991).

\(^2\)/. There is an extensive literature on ‘customer protection’ in the face of concerted efforts by vendors to take advantage of their market powers. An early paper on the topic noted that this issue is (or was) closely related in the US to equal opportunity, civil rights, and discrimination (Brandt and Shay 1979). See also Greenwald’s (1979) comment on this paper to the effect that “one of the most pernicious effects of discrimination (in credit markets) is for the group being discriminated against is to internalize the prejudices of the dominant culture.” She then references women and minorities, in particular. This is a salutary comment, reminding us of the recursive effects of action and response and the ‘production’ of distinctive ecologies of financial behaviour.
A bridge can be made between education psychologists concerned about the various functions of literacy and social scientists concerned about the costs of acquiring and processing information in the context of space and time. The former emphasise the processing, interpretation, and valuation of information in context; the latter emphasise the collection and assessment of information against individual intentions and commitments. Psychologists contend that the processing of information requires scarce cognitive resources, given the other issues that compete for the attention of individuals. Economists and economic geographers suggest the collection of information requires scarce economic resources, given budget constraints and expectations of future welfare (payoffs). March and Simon (1993) and, more recently, Gabaix et al. (2006) seek to integrate cognitive and budget constraints into a comprehensive model of information processing.

**Intention, Behaviour, and Environment**

One implication to be drawn from the significance attributed to information is that people are basically information-processing beings. Less charitably, people are treated as information-processing machines driven by their preferences or, more formally, by their utility functions. The first statement is obviously true. Cognitive science has shown that people ‘automatically’ process environmental stimuli (information), and are especially sensitive to sight and sound (spatial awareness). It has also been shown that there are cognitive limits to people's capacity to process environmental stimuli. Whereas it seems obvious that more information is better than less information, people are accustomed to sifting and sorting information according to its immediate relevance and the degree to which it fits existing albeit often inchoate frames of reference. Context-dependent framing is a pervasive aspect of information processing, providing a means of selecting the relevant information and judging its value (Tversky and Simonson 1993).

By contrast, conventional notions of financial literacy would have it that information is collected, then interpreted, and finally assessed in terms of its value. Implied by this logical sequence of actions, is a level of deliberation and self-consciousness that cognitive scientists find difficult to accept (Wenger 2002). By their assessment, intuition rules the day buttressed by past experience and tried-and-true rules-of-thumb (Gigerenzer et al. 1999). Whereas much of conventional economic theory would have people optimise or maximise their utility functions, cognitive psychologists believe that people get by with second- or third-best rules-of-thumb being normally content to make decisions on the basis of information that tends to confirm pre-existing commitments. Most people, most of the time, select amongst the available information rather than
processing the available information so as to update or adapt their behaviour in a manner consistent with Bayesian reasoning (Vlaev et al. 2011).

Kahneman (2011) believes that most people rely on intuition rather than deliberation to make decisions thereby relying upon habitual practices that claim widespread acceptance in the relevant community. He suggests that deliberation requires a level of self-consciousness that few people recognise as necessary or, indeed, desirable given their experience with heuristics that provide rough-and-ready solutions to most problems. Nonetheless, deliberation is important in some spheres of life. For example, saving for retirement requires the translation of intention (recognition of its importance) into planning (consideration of instruments needed to affect action) and action (implementation). In the absence of institutions or social norms that sustain this type of behaviour, people must make their own plans for the future. Those that plan for the future are those that are able to conceptualise the link between current saving and future income (Clark et al. 2012).

If self-evident, the reality is more complicated than often recognised. For instance, saving for the future typically requires discounting current consumption in favour of future welfare in circumstances where current consumption may have strong emotional and social value. In any event, recognising that most people, most of the time, are risk averse and heavily discount the future, planning for a future ‘self’ that may or may not exist in 40 years time can seem a highly abstract notion. Planning for the future appears to require three conditions. First, people seem to need or have demonstrated an unambiguous relationship between cause and effect: that is, saving now and over time will result in a certain outcome in the future (retirement welfare). Second, people prefer to save for the future by taking small amounts of current income and putting it aside in a ‘lock box’ which can be accessed should they need to do so. Third, there needs to be a sense of urgency: retirement must appear to be salient (Clark et al. 2012).

Neither habit nor this version of deliberation fits comfortably with standard approaches to economic and financial decision-making (Strauss 2008, 2009). Early work on the role of information in economics assumed a rational agent and showed that the costs of finding relevant information combined with information asymmetrically distributed in space and time ‘constrain’ individual behaviour and create the possibility of sub-optimal social welfare. For many years, this analytical logic was conceived in the terms made popular by Simon (1956): people are boundedly rational (see also Gabaix et al. 2006). The flipside of this conception of rationality is a recipe for public policy. To the extent that the costs of information and its asymmetrical distribution are not resolved in the
marketplace, governments have a role in providing more information to market agents consistent with their interests and overall social welfare (as suggested by the UK Thoresen Review 2008). More information is better than less information. But, ‘extra’ information may be ignored if it is provided in ways inconsistent with how people frame their options (Thaler and Sunstein 2008).

By this assessment, dualities such as rationality versus irrationality are beside the point. If useful for theorising behaviour and system-wide performance, the empirical evidence for such distinctions may be hard to justify. At one level, the idea of rationality could be treated as an ideal or normative standard by which to judge behaviour providing a means of calibrating shortfalls in observed behaviour. At another level, labelling observed behaviour as in some sense irrational runs the risk of implying or suggesting that the normative standard of rationality is a viable or practical objective. Those informed by the behavioural revolution led by Kahneman and Tversky (1979) amongst others, presuppose human beings are rational (if considered in the light of human evolution) and focus instead on the range of behaviour in different types of environments. Some environments are more challenging than others, leading to variations in behaviour and outcomes (Smith and Easterlow 2005). In many environments, in fact, habit may be more than adequate to the task (Clark 2010).

Cognitive science is best when focused on behaviour and weakest when it comes to specifying what counts as an ‘environment’ including its attributes as well as its consequences (Clark 2013). Normally, environments are treated as the action spaces of individuals and, by default, appear in testing regimes as communities, cities, and regions. More formally, we can define an ‘environment’ as an action space characterised by (a) a set of incentives and sanctions on individual behaviour, (b) a set of institutions that provide ‘services’ enabling or limiting individual behaviour, and (c) a set of boundaries that define the relevant spatial and temporal dimensions of (a) and (b) and hence the scope of individual behaviour. So, for example, incentives and sanctions on individual behaviour can be formal (as in legislation and the law) or informal (as in market prices and prospects). Institutions can facilitate individual behaviour by providing resources consistent with realising current aspirations for future welfare. This occurs in space and time: the local, the national, and the global.

Whereas the environment can be treated as a self-contained ‘locality’ or place, human geographers recognise that almost all environments are subject to forces and institutions operating outside their boundaries (Clark 2013). Furthermore, these ‘forces and institutions’ may impinge upon and disturb the ready-made world which is labelled as the ‘environment’. Whereas financial markets have notional ‘homes’ in specific jurisdictions, their functional performance is affected everyday by other
market agents located in other jurisdictions which together operate virtually 24 hours/365 days a year. In some jurisdictions, governments may seek to ‘contain’ the effects of inter-market arbitrage thereby insulating those that rely upon local markets for future income. In other jurisdictions, governments may embrace inter-market arbitrage believing that local–global interaction allows individuals to reap a premium on their investments. Governments may seek to integrate individuals’ action spaces (as defined above) with markets and institutions that operate outside of, and at higher levels, of spatial aggregation than is customary.

**Testing Financial Literacy**

Lusardi and Mitchell (2007) have developed a financial literacy testing regime, focused on identifying the sources of information people use to make financial decisions, the ways in which they plan for retirement, and their knowledge and understanding of the concepts and principles underpinning effective financial decision-making. Their research framework brings together issues familiar to scholars who work on the economics of information including economic geographers (Leyshon et al. 2006). Through their survey instruments they seek to determine what people know and what their expectations are in relation to retirement income. Nonetheless, they do not explicitly distinguish between intuitive responses to market signals and self-conscious deliberation. Their interest in retirement planning and the ways in which people conceptualise related issues suggests that retirement planning involves deliberation whether self-conscious or otherwise.

Their testing regime is distinctive in that it is assumed that retirement planning involves saving for the future and investing those savings in appropriate investment products provided either through pension sponsors or directly through local and global financial service providers. Furthermore, it is assumed that saving and investment involves risk and uncertainty. Lusardi and Mitchell are very interested in respondents’ risk preferences and their capacity to distinguish between different levels of risk in relation to expected returns. In these ways, their testing regime is especially relevant to the Anglo-American world and a number of continental European countries where individual wellbeing is increasingly a function of their financial acumen. By contrast, Kahneman and Tversky’s problems were designed to test human reasoning rather than how people process the information contained or implied in the specification of the problems to be solved.³

³/ As well, respondents were undergraduates or graduate students. As such, the problems posed had little obvious bearing on respondents’ immediate or long-term wellbeing. This is typical of experimental psychology (see Baron 2008).
To illustrate the logic behind testing financial literacy, in this paper I refer to an unpublished survey (2011) of participants in Germany’s largest industry-based, multi-employer Riester pension provider. MetallRente provides third-party options for investing modest tax-preferred employer and employee contributions in a suite of retirement savings and investment products. Some of these products are open to the gyrations of global financial markets; others provide a minimum return guarantee. The Riester retirement savings option was introduced in 2002 as part of the German federal government’s discounting of future social security benefits (Burger and Clark 2011). These types of schemes are voluntary and, in some cases, are tied to industry-wide collective bargaining agreements. As such, participants in any survey of participants in retirement saving schemes have an obvious stake in the financial performance of the institution and in the questions posed and the answers provided. Notice, our survey was voluntary: there is, inevitably, self-selection bias in the results (see Appendix).

The survey was comprised of 53 questions, organised into separate sections. The first section (A) asked 18 questions about respondents’ saving behaviour including questions about how much they save, how they save, and the sources of information used in making decisions about retirement savings. This section was followed by a short section (B) of 5 questions devoted to risk attitudes and judgement. The final section (C) was comprised of 30 questions, focused on respondents’ socio-demographic characteristics including region of residence. In section B, 3 questions were posed as shown below (translated from the German). With minor modifications, these three questions have provided a standard reference point against which to test and compare financial literacy around the world (see Bumcrot et al. 2011 on the origin of these questions and recent additions).

The questions are shown in italics. A brief explanation of what each is meant to test is provided immediately thereafter.

21. Assuming the interest on your savings account is 1% per year and the inflation rate is 2% per year, will you be able to buy the same amount, more or less with the credit in your savings account after one year? Options: More, Less, The same, Do not know. This question tests, in part, respondents’ understanding of the effects of inflation on the real value of money.

\footnote{Note that testing financial literacy almost always privileges the individual as the decision-making unit. In fact, as observed by Jane Pollard (pers. communication), many people make financial decisions in consultation with others and especially partners and other household members. As shown by Clark et al. (2012), partners can allocate risk between them and make investments according to their respective short-term and long-term expected incomes in ways that confound psychological tests of reasoning and judgement (against theoretical expectations). Given the limits of this paper, this issue is not considered in any depth.}
22. Assuming you have €100 in your savings account, the interest rate is 20% per year and the amount is in the account for 5 years, how much money will be in your account after 5 years? Options: More than €200, Exactly €200, Less than €200, Do not know. This question tests, in part, respondents’ understanding of the benefits of compounding.

23. Is the following statement correct or incorrect: the investment in a single share usually brings a safer profit than in equity funds. Options: Correct, Incorrect, Do not know. This question tests, in part, respondents’ understanding of the benefits of portfolio diversification.

In Table 1, answers to each of these questions are categorised as ‘correct’, ‘incorrect’, or ‘skipped or does not know’. In brackets, we have provided the results of a national survey of German residents by Buecher-Koenen and Lusardi (2011). Briefly, it shows that 68 per cent of our respondents and 78 per cent of Buecher-Koenen and Lusardi’s were correct on the inflation question although nearly 30 per cent of our respondents and 17 per cent of their respondents either did not know or skipped the question. On the benefits of compounding, 59 per cent of our respondents were correct whereas 82 per cent of their respondents were correct. Again, a significant portion of our respondents either did not know or skipped the question. On the virtues of portfolio diversification, our results and their results were very similar.

<table>
<thead>
<tr>
<th>Question</th>
<th>Correct</th>
<th>Incorrect</th>
<th>Does not know or skipped</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inflation</td>
<td>68 (78)</td>
<td>4 (5)</td>
<td>28 (17)</td>
</tr>
<tr>
<td>Compounding</td>
<td>59 (82)</td>
<td>15 (7)</td>
<td>26 (11)</td>
</tr>
<tr>
<td>Diversification</td>
<td>62 (62)</td>
<td>2 (2)</td>
<td>36 (36)</td>
</tr>
</tbody>
</table>

Note: Figures in bold represent in per cent the responses of MetallRente survey respondents; figures in brackets represent the per cent responses in the survey reported by Buecher-Koenen and Lusardi (2011).

As for how many respondents got all three questions correct, in our case 47 per cent of respondents were in this category whereas 53 per cent of their respondents were in this category. A large proportion of their respondents got two questions correct (72 per cent) compared to our respondents (55 per cent).5 In our study, 40 per cent of our respondents skipped at least one

5/. It matters whether people are able to get two or three answers correct. Getting one correct may be just a matter of guesswork. Likewise, it is possible that some respondents might guess the correct answers to two
question or didn’t know (compared to their 37 per cent), and 23 per cent of our respondents skipped all questions or didn’t know (compared to their 8 per cent).

In our survey the higher the income of respondents the more likely they were to get two or three questions correct. Those with a university education, and those committed to save more each year were also more likely to get two or three questions correct. On the other side of the equation, women and trade union members were less likely to get two or three questions correct. In this respect, financial literacy is correlated with respondents’ social and economic status reflecting either (1) the benefits of higher levels of education and greater levels of knowledge and understanding, or (2) an existing commitment to high levels of retirement saving consistent with their education and professional responsibilities, or (3) notwithstanding the lack of relevance of respondents’ age, higher levels of income and high levels of saving reflect the salience of saving for the future. If these results are largely self-evident, it is notable that a significant proportion of our respondents either skipped answering one or more of the questions or simply didn’t know.

Context-Specific Reasoning
Comparing our results to those of Buecher-Koenen and Lusardi, it is possible that their results reflect the German nation as a whole whereas our results reflect the industry and regional concentration of respondents. Elsewhere, it has been shown that there can be marked geographical differences in financial literacy within and between countries. In Clark (2013), I provide an explanation for the distinctive state, regional and urban patterns of financial literacy in the US, Italy and Russia focusing upon a stylised model of behaviour in response to uneven surfaces of market information and experience in these countries. As well, we show in Clark et al. (2012) there are distinctive regional differences in the UK preference for annuities (distinguishing between north and south, east and west). Here, I consider the meaning and interpretation of these questions. In large part, the financial literacy programme relies upon the integrity of the questions.

Shafir et al. (1997) note that money illusion is one of the staples of economic theory and policy, on one hand being an indication of how people can get things wrong while, on the other hand, being a salutary lesson about the often ineffective translation of macroeconomic policy into microeconomic reality. Shafir et al. (1997, p.344) observe that money illusion is common and is "often manifest" ...
"in familiar contexts and among people who, at some level, know better." Here, immediately, is a distinction that challenges the rationale of the financial literacy testing regime. At one level, people may well recognise the difference between the nominal and real value of money but, nonetheless, act in response to the nominal value of money. So, it might have less to do with knowledge and understanding and more to do with behaviour in context. They suggest people typically respond to a situation according to how it is presented in nominal terms and only rarely take the time and make the effort to distinguish between nominal and real values.

Shafir et al. suggest that "nominal representation is simpler, salient, and often suffices for the short-run" notwithstanding the fact that "people are generally aware that there is a difference between real and nominal values" (p.347). Referencing widely recognised behavioural biases and anomalies, they also note that people are more accepting of a positive but lower than inflation increase than they are accepting of an absolute loss (see also Krueger and Funder 2004). With respect to Question 21 (above), we might have expected some confusion amongst respondents about how to answer the question given that a significant portion of respondents would likely accept a 1 per cent positive return notwithstanding an inflation rate of 2 per cent. Further into the paper, Shafir et al. also show that how issues are anchored in a particular setting or context can transpose an issue that seems to be something binary (right or wrong) into something that is acceptable to community norms or the circumstances of certain regions or countries. People are space-time myopic. The context of behaviour may warrant such behaviour.6

The compounding question is based upon the fact that the rate of return on investment can be higher over time than a constant rate of return for a sequence of years if the return for each year is added to the volume of assets then invested for each of the subsequent years. Hidden behind Question 22 is the realisation that the sum invested grows by the sum invested in the previous year plus the return on that investment. This is the principle of compounding, which ‘rewards’ holding true to a longer-term investment programme. It has broad application in investment management, and suggests that the costs of short-term return-seeking strategies may be higher than many people appreciate (Clark 2008). In a related vein, Dimson et al. (2002) show that in the UK and US financial

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6/. Bertrand and Morse (2011) set their tests of reasoning with respect to the fees and charges of payday loans against the norms evident to respondents in their “areas”. While the geography of their study is not entirely clear, it is apparent that the sites of data were sub-sets of US states, often large metropolitan areas. They do not interrogate the geography of their survey results. But the significance of ‘anchoring’ responses by “area” is readily apparent. See more generally McCormack and Schwanen (2011).
markets over the past century equities out-performed bonds if each years’ dividends on equities were added to the volume of assets then re-invested the following year.

Nonetheless, there are two issues concerning the framing of the question. It is widely recognised that many people have difficulty in coping with probability, and its application to a wide class of problems including Bayesian reasoning (Baron 2008). While people can be taught the concept, and its application to topics such as investment strategy, it does not appear to be intuitively or easily understood unless explained by relevant examples (Gigerenzer et al. 1999). More problematic, people are, more often than not, influenced by the nature and context of a problem rather than ‘seeing-through the problem’ to the method needed to solve it and other similar problems (Clark et al. 2006). In this respect, it may have been difficult to grasp what a 20 per cent return per year means. Alternatively, in the German context a 20 per cent return per year would be extraordinary. It could be interpreted as inflation, speculation, and excessive risk-taking—each of which is subject to social opprobrium. As stated, Question 22 appears implausible or worse.

Portfolio diversification (Question 23) is one of the cornerstones of the neoclassical theory of finance (Merton and Bodie 2005). Owed to Markowitz (1952), it is a means of managing the risks associated with investment by distributing the risks of investment across a portfolio of securities. Ideally, investment portfolios should be designed around different asset classes (equities, bonds, etc.). As well, there may be risk-mitigation benefits in holding a large bundle of stocks (Litterman et al. 2004). Diversification hinges on policies regarding the mix of asset classes (risks) and their respective contributions to the total portfolio. Asset-specific diversification hinges on policies regarding the number and selection of securities (eg. stocks). If left to their own devices, pension plan participants tend to make and hold to an initial 50/50 split between domestic equities and bonds. Inertia and home-bias dominate (see Samuelson and Zeckhauser 1988; Huberman 2001).

Elsewhere, it has been shown that amongst people who are ‘in the market’ (knowledgeable of market risks) the diversification of savings portfolios depends upon respondents’ age, income, and spousal commitments (Clark et al. 2012; ch.6). Younger, relatively lower income and single individuals tend to over-weight one asset or a small group of assets because they lack the capacity to diversify investments. Amongst those not so privileged in terms of market position, there is

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7/ Two of the three questions rely upon respondents’ understanding the nature and use of percentages to represent risk and return. Given that many people are not comfortable with this kind of figurative representation, use of this notation may prompt non-response before any attempt is made to comprehend the substance of the questions (see Baron 2012; Clark et al. 2006).
widespread distrust of the providers of investment and retirement savings products, including balanced portfolios and diversified asset-specific products. For many people, these products lack transparency, are costly, and involve risks that can be neither adequately understood nor anticipated. They have a much higher confidence in property investment believing that the potential risks associated with one asset class and often-times one or two related investments are far easier to understand and control than third-party provided diversified investment products (Clark 2012).\textsuperscript{8}

These findings are not necessarily relevant to Germany. But they do suggest that it may be entirely reasonable to discount the notional benefits of portfolio diversification, if circumstances warrant. To illustrate, Burger (2011) showed that over the period 2002–2010 those joining the Riester pension saving scheme increasingly (year-by-year) shifted away from savings products that were exposed to market risks and returns to savings products that promised capital preservation and a minimum rate of return. They were willing to give-up higher possible payoffs for risk-minimisation, a finding entirely consistent with Kahneman and Tversky’s (1979) prospect theory which emphasises loss aversion. In effect, they chose bonds over equities, possibly believing that the former are underwritten by German banks and the nation-state whereas the latter are expressions of Anglo-American casino capitalism (Sinn 2010).

Being loss averse, new participants to Riester saving may have unwittingly assumed systemic risk. With the introduction of the Euro, European banks began to diversify their holdings of Euro-denominated bonds, treating government bonds as inter-changeable and essential ‘risk-free’ (as they would treat German bonds). As the global financial crisis morphed into the Euro crisis, the risks associated with holding Euro-denominated bonds from the Mediterranean region exploded. By contrast, equity returns in Anglo-American financial markets have been reasonable with relatively low levels of market volatility. At the limit, the risks associated with a globally-diversified balanced portfolio tilted towards US equities may have been a better bet than the ‘certainties’ of the Eurozone. Participants’ risk aversion with providers’ inertia and home bias have combined to under-cut the integrity of pension promises.

\textsuperscript{8/}. Practitioners observe that notwithstanding knowledge of the virtues of risk diversification, many clients do not translate knowledge into decision making (Chhabra 2005). This could be because advisors have undue influence over clients steering them into opportunities that are inappropriate. However, the nature of diversification offered is often so abstract that people find it difficult to conceptualise the value of this option preferring something more tangible.
Locating Financial Literacy

The plausibility of the standard tests of financial literacy was disputed by undercutting the generality of the three questions which are the basis of the literacy-testing programme: the ‘correct’ meaning and interpretation of each question may be difficult to sustain in the face of space and time. In a related vein, Sharpe (2007, p.11) suggests that “investors differ by geographical location, in home ownership, profession, and so forth. We term these aspects an individual’s position. If two people have different positions they may wish to hold different portfolios. Similarly, people may have different feelings about risk, versus future gratification, and so on.” By this logic, position combines the materiality of space and time with preferences and aspirations (Clark 2012b). From this vantage point, it is easy-enough to dispute test questions that require dichotomous right or wrong answers.

Notwithstanding my critique of the test questions, financial literacy is important for many people even if its specific character and dimensions vary by respondents’ place in space and time. At issue is whether people can be taught financial literacy, assuming it can be tailored to their position. Here, there is considerable dispute and doubt. Kahneman (2003, 2011) is sceptical. Other psychologists are less pessimistic, suggesting that education has a role in fostering deliberation especially if there is a clear link between salience and cause and effect (Hogarth 2001; Doherty 2003). Sedlemeier and Gigerenzer (2001) provide evidence suggesting it is possible to train people to think and act Bayesian notwithstanding the fact that many people seem unable or unwilling to conceptualise in Bayesian terms the significance of specific events against underlying patterns (Jones and Love 2011).

Experimental design and tests of reasoning is the domain of psychologists. More concretely, attempts have been made to put financial literacy in practice, framing the design and implementation of such programmes in ways relevant to people’s lives. One example can be found in Oakland (California). Revolution Foods is a private, for-profit social enterprise incorporated in Delaware as a “Benefit Corporation”, a legal incorporation in which social value is a part of the

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9/. There is a veritable industry based upon the assumption that people are self-improvers. The ‘self-help’ industry provides simple recipes for governing oneself, promising to translate impulsiveness into deliberation and rational action. See, for example, Baumeister and Tierney (2011) on the virtues of willpower (compare Ainslie 2001). Locating solutions to perceived shortfalls in wellbeing the individual can ignore many factors, including the interaction between wellbeing, social position, and the resources available by which to make effective plans for the future (see Iyengar 2010, Ch. 3).

10/. See Liebman and Luttmer (2011) who show when people are provided (on a costless basis) information relevant to crucial aspects of their pension security, they are likely to respond in ways consistent with their long-term welfare. It is not just a question of the volume of information; its perceived veracity, salience, and accessibility are all likely to affect perceptions of its value and hence likely behavioural responses.
company’s mission (Reiser 2011). The new Benefit Corporation legislation, currently passed in 8 states, protects firms that maximize social benefits as well as profits. Revolution Foods was formed to provide access to high-quality, cost-effective, nutritious and environmentally sustainable school lunches that are primarily funded by the federal free and reduced lunch programme. Serving markets in California, Chicago, Colorado, New Jersey and New York, Texas and New Orleans it produces approximately 125,000 healthy lunches a day with ambitious plans to double in size over the next couple of years. Revolution Foods is a triple-bottom-line enterprise (profit-focused, environmentally committed, and socially conscious). It is supported by a mix of venture capital and entrepreneurship companies from the Bay-area whose interests can be characterised, in part, by a commitment to foundation mission-led investing (see Hagerman and Wood 2012).

With target markets in inner-city school districts, Revolution Foods typically employs minority workers from adjacent communities to produce, assemble, and deliver the healthy meals. Encouraging fulltime employment, Revolution Foods pays above minimum wages, provides healthcare and dental benefits, and the option to participate in a 401(k) retirement savings plan and take stock options in the company as socially responsible business (as suggested by Wood and Hagerman 2010). Concerned about their employees’ money management, one aspect of Revolution’s workplace education programme has involved demonstrating the advantages of bank accounts over payday cheque-cashing stores. Payday cheque-cashing and loan provision outlets are widely recognised as expensive, and often injurious to people’s long-term welfare if used regularly for non-emergency purposes (Bertrand and Morse 2011). Considerable effort has been devoted to designing information disclosure and dissemination regimes so as to encourage people to be better judges of the respective costs of payday stores and banks. However, much of this activity has had limited effect (being rather general in conception and application). Bertrand and Morse’s field experiment has shown that these disclosure regimes have had little tangible effect.

DBL Investors, a venture capital firm based in San Francisco, was the company’s initial investor in 2006 and today works closely with the company having a board seat while providing support for programmes in the area of workforce development and environmental stewardship. DBL Investors, in partnership with a local foundation, created a financial literacy programme for the company’s employees at its Northern California Culinary Centre in Oakland, California. Prior to the workplace

11/ In Clark et al. (2012, Ch.9), we argue that many employers are ambivalent (at best) about assuming such responsibilities, notwithstanding the fact that their employees bear the burden of ambivalence. In a related paper Mullainathan et al. (2012) note financial advisors often “reinforce biases [of their clients] that are in their interest”. Regulation may be needed to counter ambivalence and advantage-seeking by those in the position to appreciate the costs and benefits of alternative arrangements (Campbell et al. 2011).
financial literacy programme, approximately 40 per cent of Revolution Foods’ hourly workers did not have a bank account and could not use direct deposit for payment of wages and salaries. Another 30 per cent had a bank account, but did not have their wages immediately deposited into their bank account through direct deposit. Only 30 per cent of hourly workers had an account and used it for the automatic deposit of wages. The in-house literacy programme identified the costs of payday cheque-cashing stores noting the costs per cheque and the costs over a year of nearly $300. The costs of travelling to cheque-cashing stores in the local area were emphasised in terms of lost time and money for gasoline to travel to the stores versus an automatic payment at midnight on pay day. As well, the accessibility of wage and salary payments through ATMs was made plain, compared to payday stores.

Various myths were discounted. It was explained that government is not notified of account balances so that “having a bank account will not disallow your participation in government programs.” The various ways bank accounts could be used for everyday transactions was emphasised. Finally, two institutions (a US-certified Community Development Financial Institution and a credit union) were identified as willing to accept low-income customers that eliminated, or significantly reduced, the standard account opening, service fees, and ATM fees. In addition, the venture capital investors in Revolution Foods donated funds for the financial literacy programme to kick-start employees’ savings accounts.

Consistent with findings in cognitive psychology (Harvey 2012), demonstrating the costs of relying on payday stores relative to the advantages of low-cost banks made an appreciable difference to hourly workers’ views about banks and their behaviour. Quantifying cause and effect, demonstrating value in the short term and over the long term, and identifying relevant local institutions as opposed to requiring workers to search for these outlets on their own account, have had immediate and tangible benefits. In this case, of the 51 employees at the Oakland site who participated (out of 100 for whom the programme was relevant), 50 per cent were not on direct deposit and of those 20 per cent have since enrolled in the direct deposit of their wages (a success rate consistent with other related initiatives; see Hood et al. 2009). As such, this instance adds weight to Bertrand and Morse’s (2011, p.1889) field experiment where they found “getting customers to think more long term about the adding up of the dollar costs over time, putting the loan in the context of comparable products to increase its ‘evaluability’ and to a lesser degree, disclosing information on the typical profile of payday loan refinancing significantly reduces the frequency and amount of payday borrowing.”
Scaling-Up

Throughout, abstract (context-free) tests of financial literacy were set against space and time (context-dependent) conceptions of financial literacy. This revealed the limits to literacy testing regimes which treat the world as given, rather than interpreted and made through belief, reason, and experience. One implication of this argument is that abstract conceptions of financial literacy are more consistent with formal education and the protocols of professional experience shared amongst the cosmopolitan professions of developed and developing economies than the lived experience of people not so advantaged by position and status (as implied by Bumcrot et al. 2011). This does not deny the significance of literacy mapping. The case study suggests that effective financial literacy programmes may be, more often than not, local rather than national (Tufano 2011).

In doing so, literacy was juxtaposed with illiteracy, the cosmopolitan with the commonplace, the educated with the less educated, and the global with the local. This strategy has certain advantages being useful for clarifying the issues and constructively engaging with the nature and scope of financial literacy in modern societies. Nonetheless, it has certain disadvantages, including silence on the diversity of behaviour between the polar extremes. In many reported surveys of financial literacy, a significant portion of respondents are somewhere between financially literate (with three out of three questions answered correctly) and financially illiterate (with three out of three questions answered incorrectly). Furthermore, this type of analytical strategy can be used to justify policies of neglect (supposing that mobilising the financially illiterate at the local level is just too expensive) and policies of universal engagement via the principles of financial decision-making (supposing that education can solve the problem notwithstanding the uneven surface of educational attainment in modern societies).

If we assume, for the moment, that the financial literate can be relied on to look after themselves and the financially illiterate deserve targeted education and training, what of those in the middle? One answer is that they deserve ‘action spaces’ that are well-regulated in the sense that third-party agents and the financial services industry in general do not take advantage of their partial knowledge of financial principles and the presumption that they are rational information-processing beings responsible for their own welfare. Another answer is that they deserve a level of disclosure and transparency consistent with the nature and scope of the financial decisions for which they are responsible, even if these decisions are embedded in institutions which contract on their behalf for financial products and services. Inevitably, the scale of regulation implied by these two propositions is at least state and provincial, and more properly national if not international. Further, it requires
significant enforcement capacity and judicial oversight rather than a laissez-faire state legitimised by
the presumption of agent rationality (Jackson and Roe 2009).

Those not able or not willing to be financial decision-makers in well-regulated environments are
nonetheless deserving of programmes and policies that are likely to add to their long-term wellbeing.
There are three classes of possible interventions. At one level, they deserve protection from
predatory providers of financial services, whether by regulated standards of service provision or by
an outright requirement that service providers take beneficial responsibility when considering
applicants for certain types of financial products. At another level, they deserve access to
institutions and service providers whose long-term business objectives are consistent with the
welfare of those most at risk in society to predatory sales practices. This may involve, for example,
promoting the development of banking and financial service providers that were chased-out of the
market over the past 25 years (for example, cooperative societies, mutual insurance companies, and
banking and lending societies). At yet another level, they deserve financial literacy programmes that
are salient to their interests, being sensitive to the context in which they live and work.

By this account, financial education in secondary schools comes as a distant priority. In part, this is
because those that most need financial education are typically located in communities where the
quality of education is the least satisfactory. In part, this is also because designing and providing
financial education curricula sensitive to current and prospective needs by geography and socio-
demographic characteristics carries with it many issues which sit uncomfortably with the liberal-
democratic ethos of individual advancement and mobility (beyond the community). Salience is
determined, in part, by the reference community as well as by the aspirations of curriculum
designers as to enhancing individual competence over the long term, whatever the target groups’
communities. Perhaps this is an overly pessimistic view of the likely palliative effects of standardised
educational curricula (in the area of financial knowledge and understanding). As well, it ignores the
commitment of Western democratic states to the education of their citizenry, whatever their
situations and prospects (John Stuart Mill's conception of an educated voting public).

Nonetheless, a number of countries have come to believe that regulation, education, and targeted
intervention are likely to be insufficient in terms of protecting the long-term financial welfare of a
large segment of their resident population. This is especially evident in the area of pension saving
where the combination of government reforms to existing social security entitlements, declining
benefit values and certainty associated with workplace savings schemes, and declining real wages
amongst middle-class families have conspired to discount expected long-term incomes (Clark et al. 2012). Recognising the costs and inefficiencies associated with existing private saving instruments, recognising the ambivalence of third parties as regards many people's long-term welfare, and informed by the findings of the behavioural revolution as regards to space-time myopia, a number of countries have bypassed the financial literacy issue by providing compulsory savings schemes that are specifically targeted at middle and lower income earners.

The UK government's National Employee Savings Trust (NEST) is an example of this type of policy intervention and institution. Bipartisan political debate about the costs and consequences of financial illiteracy and the problems associated with workplace pension provision has resulted in the formation of a national institution aimed at the bottom 30 per cent (or more) of the working population in what amounts to a quasi-compulsory saving scheme. Participants are automatically enrolled into the scheme at the workplace, make a fixed-rate contribution to the scheme from gross salary (with matching contributions from their employer augmented by a related tax benefit), and are automatically placed in the NEST default investment fund, whose policies and practices are determined by an independent board of directors. NEST relies upon inertia, eschews individual choice and decision-making, and makes no demands on participants in terms of their financial knowledge and understanding (Thaler and Sunstein 2008). Subtly, it seeks to discourage active involvement by the participant, his or her employer, and any related financial adviser.

As such, NEST is a scalable solution to financial illiteracy and the diversity of knowledge and expectations amongst a large segment of the working population (typically not covered by workplace pension schemes). Remarkably, it claims the support of the three major UK political parties and survived the transition in 2007 from the Labour government to the coalition government led by David Cameron. In broad terms, NEST represents a shared belief amongst the political elite that the average person is unlikely to make effective decisions when it comes to planning their long-term retirement income. But notice, it leaves open the possibility that those with the requisite skills and interest in taking responsibility for their long-term incomes may make their own arrangements whether through their employer or through third-party providers. Nonetheless, NEST sets the standard by which to judge existing arrangements for workplace pension saving, requiring provision to be at least as beneficial to the participant as the government scheme. As such, it is a significant retreat from conventional conceptions of Anglo-Saxon neo-liberalism.
However, three caveats should be acknowledged. First, whatever the specific interests of participants, government is committed to enhancing long-term saving amongst those least able to make informed financial decisions. It is willing to violate people’s immediate interests by promoting their long-term interests, implying a degree of paternalism at odds with the perception that Western societies are dominated by a neo-liberal commitment to individual autonomy. Second, NEST is a money purchase scheme rather than a defined benefit scheme and, as such, does not promise or commit to a certain level benefit upon retirement. Third, whether or not it will be effective depends a great deal upon the governance of the scheme and the ways in which an effective balance can be achieved between the conservation of contributions and investment returns. Having begun in the midst of the greatest financial crisis since the 1930s and the prospect of an unresolved but continuing Euro crisis over the foreseeable future, plans made in the middle years of the past decade about the likely long-term cumulative rate of return on default fund investments may not be realised. Whereas NEST may be an effective solution to the scale problem, it may not provide an adequate supplement to the Basic State Pension.

Conclusions
The financial literacy project has gathered momentum, enlisting academic and institutional support on a global basis (Rutledge 2010; World Bank 2009). Nonetheless, questions can be raised about its relevance or salience for many people. In a related vein, questions can be raised about how best to measure financial literacy, the object of testing, the test procedures, and the nature and scope of the issues used to test respondents’ knowledge and understanding of financial literacy in different contexts. Elsewhere, I have argued that observed geographical patterns of financial literacy (by state, region and country) can be explained, in part, by long-term economic growth and its associated urban and regional footprint (Clark 2013). The quality of financial literacy apparent in some regions can also be explained, in part, by the norms and customs associated with the emerging institutions of global integration and trade (see Storper 2006) and a thorough grounding in Scott’s (2008, 2010) “cognitive capitalism”.

The financial literacy project has a remarkable spatial sweep (and level of abstraction). In testing for respondents’ comprehension of the principles of financial theory, the ways in which these questions are posed and the binary nature of the answer options (right or wrong) would have respondents focus upon abstract principles rather than the nitty-gritty of everyday life. The questions used to test financial literacy mimic the form and experimental procedures of behavioural and cognitive psychology. Their tests of reasoning place a premium on simplicity, stripped bare of context and
experience (Baron 2008). In this case, however, the testing regime is more ambitious in that what is sought is a quantitative measure of respondents’ knowledge and understanding of financial concepts (embedded in financial theory and markets). It is not yet clear, though, whether higher levels of financial literacy translate into higher levels of effective financial decision-making. Financial literacy may give rise to over-confidence which is revealed as self-defeating when markets turn against convention (Clark 2012b).

The theory-first version of financial literacy contains two paradoxes. At one level, the tests are claimed to each contain an unambiguous test of financial knowledge and understanding such that it need not be ‘interpreted’ or interrogated for its ‘meaning’. As such, they do not have to be placed in context for meaning to be ‘fixed’ given the scope of other possible meanings as is the case with most other literary concepts. This strategy is necessary if respondents are to be judged ‘correct’ or ‘incorrect’ (or do not know). At another level, however, the knowledge and understanding of financial concepts needed to answer correctly is such that respondents know, or must know, that the answers demanded are as theoretical as the underlying questions. Formalism begets formalism. We may be no closer to knowing how some people behave in practice when confronted by these issues.

Even if formalism drives the specification of the tests of financial literacy, context steals into the text of the questions. In part, the problem is a lack of specificity in that the relevance of the standardised tests lacks ‘bite’ as we shift between jurisdictions (histories and geographies). The informed respondent inevitably qualifies the meaning and interpretation of each question as they bring to the issue their own experience not so much across geographies as within geographies. This represents a challenge for the informed respondent: does he or she provide the ‘theoretically correct’ answer knowing its lack of salience or does he or she simply pass on the answer with ‘don’t know’, knowing too much to answer correctly? This ‘don’t know’ category could contain at least two very different groups—they ‘don’t know’ because they are sophisticated or because they are genuinely ignorant (see Clark et al. 2012, ch.8 on the possible diversity of respondents and their likely behaviour in the context of financial planning).

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12/ See also Pinker (1999) who contends that grammar is experiential rather than innate and, as such, open to dispute. There is no universal logic that joins grammar to create a common meaning. This is, no doubt, contentious. Nonetheless, it resonates with constructivist conceptions of meaning evident in Fish (1980) and, more recently, MacKenzie (2006).
The contrast provided by the community-based financial literacy programme offered by Revolution Foods is revealing. Whereas the test regime seeks, as much as possible, to hold context at bay the community-based programme seeks to make a match between a vulnerable segment of the population and a training programme which is designed to encourage higher levels of financial literacy on a topic of immediate relevance to that population. As such, it is plain that the tests of financial literacy discussed in previous sections are abstract relative to the needs of the target population. Locating financial literacy at the intersection between respondents’ needs and their aspirations for effective control over crucial aspects of their lives seems to be a more practical objective (Liebman and Luttmer 2011). More than likely, if they were confronted by the survey questionnaire and if they were cajoled into answering the questions posed therein, they would likely skip the questions on money illusion, compounding, and risk diversification. This need not mean, however, that these issues when set in context would be irrelevant to their experience.

The significance of the Revolution Foods case study could be dismissed because it refers to a particular segment of society, and their attendant social-cum-spatial circumstances. At the other end of the spectrum, Justice John Middleton of the Australian Federal Court ruled that company directors have an obligation to be financially literate consistent with their responsibilities. Directors of a property trust failed to appreciate the significance of financial issues brought to the board, and relied on advisers. In doing so, the court found that they had breached their fiduciary duties. Obviously, what counts as financial literacy in this context is quite different than that indicated by the brief case study of Revolution Foods. But like the Revolution Foods instance, in the Australian courts financial literacy was judged as context-specific. One possible remedy being considered by the Financial Reporting Council is a training programme for Australian company directors. Education can play a role in closing the gap between financial illiteracy and literacy.

Appendix

The survey of MetallRente participants was designed relying upon survey instruments utilised in Clark et al. (2012), drawing upon Lusardi and Mitchell (2007, 2008) amongst others. Intended to test respondents’ attitudes and opinions as to the desirability of retirement saving, the survey also sought to test respondents’ knowledge and understanding of the principles underpinning pension saving via financial instruments. The survey was entirely voluntary. Not considered here is a related survey of employers, and their intentions and expectations in offering employees pension options.

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Note, compared to the UK and the US, respondents indicated high levels of trust in their employer and MetallRente as information sources on pension saving.

The survey was administered from May 2011 through to the end of September 2011. It was launched on an electronic platform and was also distributed by hand in meetings of Riester savings participants hosted by employers and union representatives. In total, 911 completed questionnaires were collected. The geographical spread of respondents, their ages, and their gender matched the characteristics of the approximately 400,000 participants in MetallRente. The largest single group of respondents were 50–54 years of age as against the 45–49 year olds who are the largest age group of MetallRente participants. Note, as well, the average income of survey respondents was also slightly higher than the average MetallRente participants. They were also less likely to be union members. Therefore, we expect that survey respondents were more knowledgeable of the issues than the average MetallRente participant.

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