

Institution: The Open University		
Unit of Assessment: C17 Business and Management Studies		
Title of case study: Emotional and attitudinal factors in financial decision-making		
Period when the underpinning research was undertaken: 2009-2019		
Details of staff conducting the underpinning research from the submitting unit:		
Name(s):	Role(s) (e.g. job title):	Period(s) employed by submitting HEI:
Professor Mark Fenton-O'Creevy	Professor of Organisational Behaviour	01/10/1997 – present
Period when the claimed impact occurred: 2013-2020		
Is this case study continued from a case study submitted in 2014? No		
1. Summary of the impact		
<p>The role of attitudes and emotion in financial behaviour has been under-researched. Policymakers over emphasise information-asymmetries at the expense of attitudes and emotions. Since 2009, Professor Mark Fenton-O'Creevy at the Open University has researched the emotional and attitudinal factors influencing the financial decision-making of finance professionals and private citizens. His research was built on by private companies ([text removed for publication] and Essentia Analytics) and has informed changes to their professional practice and commercial strategy. His research also contributed to the National Financial Capability Strategy 2015. Through extensive and diverse dissemination, including collaboration with the BBC, his work has informed citizens on the psychology of their financial decision-making and has consequently impacted on attitudes towards spending and money.</p>		
2. Underpinning research		
<p>The research conducted by Professor Fenton-O'Creevy at The Open University since 2009 consists of a programme of inquiry into psychological relationships with money and financial decisions. It includes a particular focus on emotions, emotion regulation and attitudes, and aims to investigate into these topics among both finance professionals and private citizens.</p>		
<u>The Open University led the studies of emotion-regulation among investment bank traders in EU-funded project FP7</u>		
<p>The xDelia project ran between 2009-2012, funded under the European Union's Framework Programmes for Research and Technological Development (FP7). It brought together expertise in serious games, computer science, technology enhanced learning, finance, neuroscience, psychology of finance, behavioural economics, and physiological sensors. It produced a learning pathway for professional and private traders using innovative sensor-based games targeted at improving trader performance via better understanding and management of their emotional reactions to gain and loss [O5]. In this project, Professor Fenton-O'Creevy built on data from his earlier, major qualitative study of the work behaviour and profile of 118 traders in 4 investment banks [O4]. In this earlier project they uncovered the important adaptive and maladaptive roles played by emotions in traders' everyday decision-making and the role of emotion regulation capabilities in traders developing expertise [O4].</p>		
<p>The xDelia project studied traders from two investment banks. In 2012, Professor Fenton-O'Creevy and colleagues analysed physiological data gathered from those traders during live trading across multiple days and in a period of significant fluctuations in price volatility [O5]. They built on the prior study [O4] to provide quantitative and physiological evidence of the relationship between emotion regulation capabilities and trader expertise [O5]. Related work, from 2003, also confirmed the role played by illusions of control, as a defence against anxiety, in attenuating trader performance [O7].</p>		

The Open University findings show that lack of financial knowledge may not be the primary reason for financial difficulties

In recent years, substantial amounts of public money and policy development have been devoted to providing people with the knowledge they need to manage their personal financial affairs, and regulatory regimes require providers of financial services to ensure their customers have adequate financial knowledge. However, these kinds of knowledge-based strategies have had limited success in improving how capable people are at managing their money. **Fenton-O'Creedy's** research provides important evidence that knowledge-focused approaches to financial behaviour miss a very important part of the picture – our emotional and attitudinal relationship to money. It may not be, primarily, a lack of financial knowledge that makes the difference in navigating financial difficulties – our decisions, for better or worse, are influenced by our habits, attitudes, beliefs and emotions about money.

This was confirmed by the findings from a national study (The Big Money Test) of 109,000 UK citizens' emotional and cognitive relationships with their money and finances, which was a collaboration between Professor **Fenton O'Creedy** and the BBC. Professor **Fenton-O'Creedy** and co-authors found a substantive relationship between individual's money attitudes and their likelihood of experiencing adverse financial life events and failing to 'make ends meet' [O1]. They also demonstrated important differences by gender in money attitudes, with men more likely to associate money with freedom and women more likely to associate it with love and generosity [O2]. Drawing on the same data set they highlighted the relationship between difficulties in emotion regulation and impulsive buying behaviours; and that higher levels of impulsive buying (contrary to claims in some retail research) are associated with increasing risks of financial harms ranging from denial of credit to bankruptcy [O3]. A further study in 2018 demonstrated important relationships between money attitudes, and impulsive buying [O6].

Overall, they found that despite the differences in financial training and knowledge between finance professionals and the public, there are important commonalities. For example, the research highlights the common importance of effective emotion regulation in supporting the performance of financial traders in investment banks [O4, O5] and in the reduction of harmful impulsive buying behaviours in the broader population [O3].

3. References to the research

- O1.** von Stumm, S., **Fenton-O'Creedy, M.**, & Furnham, A. (2013) Financial capability, money attitudes and socioeconomic status: risks for experiencing adverse financial events. *Personality and Individual Differences*, 54(3), 344-349. <https://doi.org/10.1016/j.paid.2012.09.019>
- O2.** Furnham, A., von Stumm, S., & **Fenton-O'Creedy, M.** (2015) Sex differences in money pathology in the general population. *Social Indicators Research*, 123(3), 701-711. <https://doi.org/10.1007/s11205-014-0756-x>
- O3.** **Fenton-O'Creedy, M.**, Dibb, S., & Furnham, A. (2018) Antecedents and consequences of chronic impulsive buying: Can impulsive buying be understood as dysfunctional self-regulation? *Psychology and Marketing*, 35(3), 175-188. <https://doi.org/10.1002/mar.21078>
- O4.** **Fenton-O'Creedy, M.**, Soane, E., Nicholson, N., & Willman, P. (2011) Thinking, feeling and deciding: the influence of emotions on the decision making and performance of traders. *Journal of Organizational Behavior*, 32(8), 1044-1061. <https://doi.org/10.1002/job.720>
- O5.** **Fenton-O'Creedy, M.**, Lins, J., Vohra, S., Richards, D., Davies, G., & Schaaff, K. (2012) Emotion regulation and trader expertise: heart rate variability on the trading floor. *Journal of Neuroscience, Psychology, and Economics*, 5(4), 227-237. <https://doi.org/10.1037/a0030364>
- O6.** **Fenton-O'Creedy, M.**, & Furnham, A. (2019) Money attitudes, personality and chronic impulse buying. *Applied Psychology*. 69(4) 1557-1572. <https://doi.org/10.1111/apps.12215>
- O7.** **Fenton-O'Creedy, M.**, Nicholson, N., Soane, E., & Willman, P. (2003) Trading on illusions: Unrealistic perceptions of control and trading performance. *Journal of Occupational and Organizational Psychology*, 76(1), 53-68. <https://doi.org/10.1348/096317903321208880>

4. Details of the impact

Building on his programme of research on the financial behaviour of financial professionals and other citizens, Professor **Fenton-O'Creedy** has reached both large and influential audiences to improve understandings of the role played by emotions, emotion regulation and money attitudes in financial behaviours. This research has been particularly impactful on private firms who have used the findings to inform changes to their commercial strategy and professional practice. The research has also had an important role in a public policy context through its contribution to the national Financial Capability Strategy, addressing information asymmetries to provide a more nuanced understanding of psychological and social influences on financial behaviour.

Open University research has been used by private firms to improve their understanding of the role of emotions in financial decisions and has subsequently informed changes to strategy and practice

[Text removed for publication] [C3], [C4].

Another example is Essentia Analytics, a high profile FinTech SME providing data-informed behavioural coaching technology for fund management firms, which has benefitted from having Professor **Fenton-O'Creedy** on their Advisory Board. For example, Essentia have recently built on his work [O7] on illusions of control among traders to examine how such illusions may lead to over-trading by fund managers during winning and losing streaks (informing their approach to data driven performance coaching for fund managers) [C6]. Founder and CEO of Essentia Analytics commented that “*Prof **Fenton-O'Creedy's** research has been highly valuable to Essentia Analytics (and, in turn, to its clients) in its work with fund managers on bias mitigation. His work on the Illusion of Control in traders' decision-making resonated strongly for me and inspired me to appoint him to our advisory board, upon founding Essentia Analytics seven years ago. Since then, we have sought his perspective and counsel on the research we have conducted on our client base, including further research into the Illusion of Control and how it is evidenced by traders in the context of winning and losing streaks*” [C6].

Open University research has contributed to the national Financial Capability Strategy

Professor **Fenton-O'Creedy's** work on money attitudes [O1] was drawn on and cited by NPC, a thinktank and consultancy who were commissioned by the UK Money Advice Service (a government sponsored financial advice service) to develop an outcomes framework for their 2015 national Financial Capability Strategy. This contributed to the emphasis on the key role of money attitudes in both the Outcomes Framework and Strategy. The Strategy aims to improve financial capability, giving people the ability and motivation to address financial difficulty. It states that “*it will focus on developing people's financial skills and knowledge, and their attitudes and motivation. This, combined with an inclusive financial system, can help people achieve the best possible financial wellbeing*” [C5]. The inclusion of attitudes and motivation, which is in line with Professor **Fenton-O'Creedy's** findings, is highly significant. Prior national policies on financial capability have over emphasised knowledge and the provision of information at the expense of an understanding of the motivational and attitudinal drivers of financial behaviour.

Open University research and collaboration with the BBC has impacted on public understanding of the psychology of financial decision-making

Professor **Fenton-O'Creedy's** work has been heavily disseminated via TV, radio and online media since 2013:

- Appearances on Radio 4's Money Box programme (Sat 26th December 2015 [C1.1] and Wed 30th March 2016 [C1.2]). The average weekly reach of people listening live to Money Box on a Saturday is 1.2m adults, for the Wednesday programme it's 750,000 [C1.3].
- Three appearances on Scottish television (Stopping Scotland's Scammers: 2015, 2016). Average number of viewers in 2015 was 445,000 and 22 program shares. Average number of viewers in 2016 was 320,000 and 17 program shares.
- Other appearances on Radio Five live and Radio Teeside.

- A videoed interview on the MoneyMail website (58,000 views in the early months of availability) [C1.4; C1.5].
- His research blog, which presents content from O1-O7 in the form of posts aimed at a non-academic audience, has attracted over 34,000 page views since 2013 with over 20,000 unique visitors and 641 subscribers [C1.6].

Through the dissemination above, this research has reached significant audiences, and it has become apparent that engagement with this work has motivated people to seek further help and advice with their financial capabilities.

This engagement was confirmed when Professor **Fenton-O'Creevy** was asked to appear live on the BBC1 documentary series 'Right on the Money' and produce web resources for the programme based on his research [O1, O2, O3, O6] which drew on data from a collaboration with the BBC LabUK and BBC Watchdog consumer programme (The Big Money Test). This series ran at 9:15 each morning across the week from 13th to 17th July 2015. Professor **Fenton-O'Creevy** created an online questionnaire, hosted by the BBC, to help the audience characterise their money attitudes and behaviours and to flag risk factors for participants. The questionnaire gathered feedback on attitudes to money and financial risk related attitudes. The questionnaire and resources remain available online (still available at 12th October, 2020: <http://www.bbc.co.uk/guides/zqkjmnb>).

A version of the quiz developed for the BBC has been embedded in a free micro course on the OpenLearn platform (<https://www.open.edu/openlearn/money-business/personal-finance/understand-your-relationship-money>). In this version, participants are asked two additional questions to gauge impact: how helpful they found the feedback on their money attitudes and whether they are likely to make changes to how they manage their money in consequence. Of the 690 people taking the micro-course, 148 completed the feedback questions (21%) [C2]. 61% found the feedback 'somewhat helpful' or 'very helpful' (30%), and 55% said they were 'likely' or 'very likely' (18%) to change how they manage their money in consequence [C2]. The kind of impact is illustrated by a comment on Mark's emotional finance blog: "*Great article. I did your quiz on the OU site and it helped me to think hard about my impulsive shopping and attitudes to saving. It made me realise that I needed to find other ways to cheer myself up. I have set up a standing order to a savings account and set myself a budget each month for non-essentials. I do still slip back into old habits sometime but am starting to build up money for a house deposit*" [C1.6].

More recently (February 2020) a version of this questionnaire (and associated benchmarks and feedback [O1-O3]) has been incorporated in an online resource for clients of Commsave, a credit union with over 24,000 members based in Northampton [C7]. The Business Development Manager at Commsave stated that this 'Money Motivations Test' "*is an important part of our offer to members. Prof. Fenton-O'Creevy provided support and advice to Commsave to develop the money motivation tool for our members, based on his prior research. As a member owned co-operative, we have a responsibility to our members to help educate them in the wise use of money, and we believe the money motivation tool helps us to achieve this*" [C8]. In addition to being available to Commsave members, they noted that they have also "*been asked by our key employer partners to make the facility available as part of money management workshops we will be delivering for them. Having the tool available enables us to go beyond the simple provision of financial guidance, adding on a personalised element that we expect to greatly improve the financial capability of our members and the staff of our payroll partners*" [C8].

5. Sources to corroborate the impact

- C1.** Media Evidence Bundle. Corroborating claim of informing the public on the psychology of financial decision making, including finance professionals and consumers
- C1.1.** Appearance on Radio 4's Money Box programme: 26/12/15.
(<https://www.bbc.co.uk/programmes/b06sdxfn>)
- C1.2.** Appearance on Radio 4's Money Box Programme: 30/03/16.
(<http://www.bbc.co.uk/programmes/b074xvfl>).

- C1.3.** Email from Senior Producer, Moneybox, giving average viewing figures for the Saturday and Wednesday Money Box programme as detailed in C1.1 and C1.2.
- C1.4.** The “Big Money Questions” interview on the Money Mail website. (10/2/2017). (<https://www.dailymail.co.uk/video/money/video-1409579/Big-Money-Questions-advertising-tricks-spending.html>).
- C1.5.** Email from This is Money giving viewing figures for “Big Money Questions” video above.
- C1.6.** Research Blog authored by ICS lead: ‘Emotional Finance: Research on the role of emotions in financial decision making’. (<https://emotionalfinance.net/>).
- C2.** Participant feedback on the OpenLearn microcourse.
- C3.** [Text removed for publication].
- C4.** [Text removed for publication].
- C5.** Report produced by NPC, commissioned by the Money Advice Service (a government-sponsored financial advice service), as the foundation for a Financial Capability Strategy for the UK. (August 2014) [p.24, footnote 49 (highlighted for easy identification) In the references section the research is listed as no.48, but this is in error].
- C6.** Email from the CEO of Essentia Analytics, Claire Flynn-Levy. See also <https://info.essentia-analytics.com/holding-the-line> and <https://www.essentia-analytics.com/about-essentia/>
- C7.** Screenshots showing use of Money Motivation Test and associated feedback and guidance on the CommSave Credit Union Ltd website, provided by Business Development Manager.
- C8.** Email from Business Development Manager at Commsave Credit Union Ltd (29/02/21).