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Book of Abstracts

#IAREPSABE2019
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PARALLEL SESSION 1 (MONDAY 11:00)

Business (HOGAN 1)

“Litigations risk and board gender diversity: Effect of firm complexity and monitoring costs”
Monday 11:00 (HOGAN 1).

Edward Lawrence (Florida International University) with Mohammad Hashemi Joo.

Abstract:
We investigate the impact of board gender diversity on securities litigation risk. Our results show that as fraction of female independent directors in board increases, the securities litigation risk decreases. In addition, the number of female independent directors needs to reach a critical mass of three to be effective in reducing the securities litigation risk. Further, our findings indicate that the effectiveness of female independent directors in reducing litigation risk is negatively related to the firm’s monitoring cost and is positively related to the firm’s complexity.

“Consumers’ behavioural responses to reactive CSR after a brand crisis: The role of CSR motives and domain on perceived benevolence and negative word of mouth”
Monday 11:00 (HOGAN 1).

Ilaria Baghi (University of Modena and Reggio Emilia).

Abstract:
Consumers perceive proactive corporate social responsibility (CSR) initiatives positively due to its seemingly altruistic nature (Becker-Olsen et al., 2006). Quite the opposite, CSR initiatives after a reputational crisis (reactive CSR) induce consumers’ negative attitude and behavior toward the company (Ricks, 2005) because they perceive reactive CSR efforts as a way to recover the image of the organization after some irresponsible actions (Groza et al., 2011). Wagner et al. (2009) investigated methods to attenuate the negative effects of a reactive CSR but their evidences are not conclusive and suggest that reactive CSR inevitably lead to negative consumers’ responses (Lee et al., 2009) toward the company. By extending this stream of literature, the current research clarifies the conditions under which the CSR reactive motives and the CSR domain could explain consumers’ favorable responses to reactive CSR after a negative event through the mediation of perceived corporate benevolence (Xie & Peng, 2009).

CSR motives
The motives underlying a social agenda have been used to explain consumer reactions to CSR (Sen et al., 2006) and the specific attributions consumers assign to CSR involvement can directly affect consumers’ purchase intentions. Scholar are consistent with the idea that consumers respond favourably to inherently altruistic and genuine CSR activities but are negatively affected by egoistic and speculative ones (Ellen et al. 2006). Batson (1998) suggests that CSR attribution are of two kinds: extrinsic and intrinsic. Extrinsic or self-interested motives have the goal of increasing the brand’s own welfare (e.g., increase profits), whereas intrinsic or selfless motives involve doing good for the benefit of the community. Considering the role that attributions play in consumer’ cognitive and
behavioural reactions, we propose that CSR motives attributions will act as key intervening variables in explaining consumer responses to reactive CSR strategy. As Xie and Peng (2009) suggest, organizations that provide sincere and altruistic recovery efforts after negative events are perceived to possess higher benevolence and a sincere concern for the community, than those that do it in a non-genuine way. When consumers perceived altruistic (intrinsic) motives behind reactive CSR strategy such effort may enhance consumers perceived corporate benevolence and reduce negative word of mouth after a negative event. On the contrary, when consumers perceived the reactive CSR motives as non-genuine (extrinsic) such effort does not induce perceived corporate benevolence and increase negative word of mouth.

CSR domain
Scholars (Pashupati et al., 2002) show that information about irresponsible behaviour that is in the same domain of the companies’ CSR commitments, affects negatively attitudes towards the company. Order of practicing and preaching suggests people interpret inconsistent practicing and preaching differently depending on the order of these behaviours. Similarly, companies that violate the same domain in which they implemented CSR policies are seen as more hypocritical than companies that implement CSR policies in the domain in which they caused harmful damages (Wagner et al., 2009). This evidence suggests that consumers’ reactions are strictly dependent on the domain of the CSR promises. Reactive CSR actions in the same domain of the previous damaging misconduct might increase perceived corporate benevolence and decrease negative word of mouth while reactive CSR in different domains may not exert the same positive outcome. The proposed conceptual model is explained in figure 1.

Materials and procedure
200 Italian participants (44% males, mean age 42 years) took part in the study online. The study employed a 2 (Reactive CSR motives: intrinsic vs extrinsic) × 2 (CSR domain: same domain of the misconduct vs other domain) between-subjects experimental design. Participants were presented with a newspaper article about a severe case of labour exploitation in the South-east factories of a fictitious apparel brand (Kromo) which implemented reactive CSR action after the scandal. In each experimental condition, we manipulated the CSR motives (intrinsic motive: “...a genuine intent to help local community” vs extrinsic motive: “...the intent to repair corporate image”) and the CSR domain (same-domain: the promotion of human and workers’ rights vs other-domain: environmental protection). After reading the newspaper article, participants were asked to rate the perceived benevolence toward the company (Xie & Peng, 2009), their intention to spread negative word of mouth about the brand (Romani et al., 2012).

Results
ANOVA shows a main effect of the CSR motives on consumers perceived company benevolence (F (1, 200) = 14.20; p < .05) and on negative word of mouth (F (1, 200) = 16.40; p < .05). The same analysis shows a main effect of the CSR domain on perceived benevolence (F (1, 200) = 9.21; p < .05), on negative word of mouth (F (1, 200) = 13.63; p < .05) and a significant interaction effect between CSR motives and CSR domain on perceived benevolence (F (1, 200) = 7.00; p < .05) and on consumer intention to bad talk about the company (F (1, 200) = 13.31; p < .05). Moderated Mediation Model: We conducted a moderated mediation analysis using PROCESS model 7 (Hayes, 2018). The details of the estimated paths are presented in figure 2. The effect of CSR motives on negative word of mouth
is mediated by perceived benevolence (indirect effect = .09, CI from .01 to .23). The mediation was moderated by the CSR domain.

Discussion
This study is a first attempt in building a comprehensive model explaining the underlying mechanism by which consumers react to CSR reactive strategy after a negative event involving the company. Literature suggests that reactive CSR leads to increasingly negative thoughts and reduces attitudes toward the company (Ricks, 2005). Results of the present study provide evidences that motives that underpinned reactive CSR and the domain of the CSR involvement are crucial factors in defining consumer reaction to this kind of strategy. Companies that demonstrate their capability in crisis handling could repair damages engaging in reactive CSR strategies. The boundary conditions of this positive effect are the ability to communicate their genuine and altruistic motivation to consumers and the efficacy of the CSR effort in the same domain affected by the misconduct damages.

“Memory-Based Models of Predicting Inferences about Brand Quality”
Monday 11:00 (HOGAN 1).

Yvetta Simonyan (University of Bath) with Daniel G. Goldstein.

Abstract:
How are consumers’ inferences about product quality related to information in memory? By modelling inferences, as well as confidence in inferences, via belief distributions, this paper aims at explaining some unsolved phenomena regarding the relationship between quality perceptions, on one side, and recognition and other memory information, on the other.

“Do fixed payments affect effort? Examining relative thinking in mixed compensation schemes”
Monday 11:00 (HOGAN 1).

Ofer Azar (Ben-Gurion University of the Negev and Laboratory of Economic Behavior of the Center of Psycho-Economic Research, Povalzhsky Institute of Administration named after P.A. Stolypin - branch of RANEPA).

Abstract:
Several earlier studies have shown that people exhibit “relative thinking”: they consider relative price differences even when only absolute price differences are relevant. The article examines whether relative thinking exists when people face mixed compensation schemes that include both fixed and pay-for-performance components. Such compensation schemes are prevalent in many occupations (e.g., salespeople and managers) and therefore are an important practical issue. Surprisingly, the ratio between the pay-for-performance and the fixed compensation does not affect effort, meaning that no relative thinking is found. Another experiment shows that this is not due to reciprocity that cancels out relative thinking. In a third experiment subjects make similar decisions without incentives and the results suggest that the different context (compensation schemes instead of price comparisons) and not the introduction of financial incentives (which were not used in previous studies) is the reason that relative thinking disappears. The results have implications for designing incentive schemes in firms and for designing experiments.
“Illumination or illusion? Placebic information and stock price forecasts”
Monday 11:00 (HOGAN 2).

Andreas Oehler (Bamberg University) with Matthias Horn, Stefan Wendt.

Abstract:
Meta studies show that stock returns – and as a consequence future stock prices – are mainly
determined by a stock’s beta factor (see Barillas/Shanken, 2018; Hwang/Rubesam, 2018) and –
depending on the stocks to be analysed and the corresponding time period – a momentum factor
and few value and profitability factors (see Barillas/Shanken, 2018). All relevant information to
determine these factors is included in past stock prices and the company’s financial statements.
Hence, other company data, such as number of employees and location of headquarter, are to be
considered irrelevant for the stock returns and prices and, therefore, irrelevant data for investors.
Langer et al. (1978) refer to this type of irrelevant data as “placebic information”. When making
investment decisions, retail investors commonly receive a considerable amount of placebic
information from financial advisors, analyst reports, or key investor information documents. The
purpose of our study is to analyse how investors perceive placebic information and whether placebic
information influences investors’ stock price forecasts when presented in addition to relevant
information. Based on the concept of bounded rationally (see Simon 1955, 1956), which accounts for
investors’ limited cognitive capacity and the necessity to use heuristics and rules of thumb, we
hypothesize that investors feel better informed when they receive more data, even though this
information is placebic, i.e. investors are subject to an information illusion. It also seems possible
that placebic information causes an information overload and distracts investors from relevant
information.

Design/methodology/approach:
We initiate a questionnaire-based stock price forecast competition. 197 participants are asked to
forecast the stock price in three months’ time and an upper and lower bound of the stock price that
will not be exceeded or undercut with more than five percent probability, respectively, within the
next three months. Following Glaser et al. (2007), this approach allows us to estimate the
participants’ expectation of the standard deviation of stock returns that is underlying their stock
price forecast. The forecast competition covers three stocks. The stocks with corresponding
information are presented successively to the participants. The first stock represents the base case.
This means that solely a stock price chart and past stock and market returns are presented, i.e. no
placebic information. The second stock is accompanied by information in the base case categories
plus selected balance sheet and cash flow statement information, including book value, total assets,
and operational profit. The third stock is presented with the same information categories as the
second stock plus additional placebic information including, e.g., number of employees, location of
headquarter, branches abroad as well as some information typically provided in key investor
information documents, such as “stock prices can depend on the demand on the stock market or
changes in the company’s profitability”. In addition to varying the amount of information between
the stocks, the three stocks exhibit a different price pattern displayed in the price chart, i.e. upward,
downward, or sideways price trend (see Oehler/Wedlich, 2018, for a similar approach). To enhance
the robustness of the results, we split the 197 participants into four groups. The first stock is the
same in all groups (i.e. the base case with no placebic information and a sideways price trend) while the groups receive different combinations of amount of information and price trend as second and third stocks in the questionnaire. In each of the four groups, the three participants with the most accurate forecast per stock received a prize money when the actual stock prices were realized after three months. For each stock, participants are also asked, i.e. in addition to the stock price forecast, to assess on an eleven-point Likert-scale whether they received all relevant information necessary to accurately forecast the stock price. Moreover, participants are asked to estimate the probability that they receive a prize in the competition and the participation fee they would be willing to pay. As participation was free of charge and participants received a participation fee of five Euros, the question about their willingness to pay is a hypothetical question to estimate the risk the participants would be willing to take in the competition. In addition, the questionnaire includes items to capture further participant characteristics that have been shown to influence stock price forecasts or trading behaviour, including participants’ financial knowledge (Abreau/Mendes, 2012), self-assessed knowledge in statistics (Glaser et al., 2007), overconfidence (Deaves et al., 2009), risk attitude (Dohmen et al., 2011), cognitive reflection (Primi et al., 2016 and Frederick, 2005), Big Five personality factors (Rammstedt et al., 2012), Reinforcement Sensitivity Theory personality factors (Studer et al., 2016), locus of control (Kovaleva et al., 2012), and positive and negative affect (Krohne et al., 1996) (see Oehler et al., 2018, for a similar approach). For the three levels of placebic information (i.e., no vs. medium vs. high amount of placebic information) we perform a series of tests of equality (t-tests) to analyse differences in the participants’ perception of how much relevant information they are provided with, stock price forecasts, expected return from the competition, and the participation fee participants would be willing to pay. Further, we run a series of multivariate regression models to analyse the determinants of participants’ expectation of stock return and risk, expectation of success in the competition, and hypothetical participation fee they would be willing to pay.

Findings:
With an increasing amount of placebic information, participants state to have significantly more relevant information available to accurately forecast the stock price. Hence, participants are subject to an information illusion as they perceive placebic information as actually relevant information. The amount of perceived relevant information, however, has no significant influence on participants’ stock price forecasts and their accuracy. In contrast, placebic information has an effect on the payoff that participants expect from the competition. For the stocks with placebic information, participants state a lower probability to win a prize in the competition than for the base case stock which means that they expect a lower payoff (defined as individually expected probability to win a prize times prize money). Simultaneously, the participants would pay a slightly higher participation fee, although this effect is not statistically significant. In combination, participants’ expected return from the competition, i.e. the difference between individually expected payoff and (hypothetical) participation fee divided by the (hypothetical) participation fee, is significantly lower. A possible explanation for the change in participants’ expectations could be that participants feel unable to cope with the higher amount of perceived relevant information, i.e. suffer from information overload, while they assume that other participants probably might derive advantage from the additional information.
Originality/value:
Our study is, to the best of our knowledge, the first one that introduces the concept of placebic information into economic decision making. As our study covers participants’ behaviour in an economic game, i.e. the forecast competition, under the influence of placebic information, our findings have implications for researchers and practitioners alike. Researchers should be aware that placebic information influences participants’ return expectations in economic games and their perceived level of relevant information. Additionally, as our participants serve as proxy for retail investors, both regulators and policy makers should consider that placebic information can significantly impact investors’ perceived level of relevant information.

“Contagion and return predictability in asset markets: An experiment with two trees”
Monday 11:00 (HOGAN 2).

Andreea Victoria Popescu (Tilburg University) with Charles Noussair
Edward Lawrence (Florida International University).

Abstract:
We investigate, with a laboratory experiment, whether contagion can emerge between two risky assets despite an absence of correlation in their fundamentals. To guide our experimental design, we use the ‘Two trees’ asset pricing model developed by Cochrane, Longstaff and Santa-Clara (2008) and evaluate some of its predictions regarding time series and cross-sectional returns in response to fundamental value shocks. We observe positive autocorrelation in the shocked asset and positive contemporaneous correlation, as the model predicts. The dividend-price ratio forecasts the returns of risky assets both in the time series and in the cross section. However, negative cross-serial correlation is not observed and there is some unexpected momentum in the non-shocked asset.

“A model of momentum and market states: Theory and evidence”
Monday 11:00 (HOGAN 2).

Liang Ma (University of South Carolina).

Abstract:
I develop a model that connects market states and momentum. The model analyses asset pricing implications of two well-known psychological biases, overconfidence and self-attribution bias, in a setting of multiple risky assets whose payoffs contain a common factor. Due to self-attribution bias, overconfidence varies asymmetrically between winners and losers, resulting in asymmetric return behaviours between them. The model generates a set of implications regarding the relation between market states and momentum and long-run reversals. I find empirical evidence consistent with these implications.
Benno Guenther (London School of Economics).

Abstract:
Various types of investors exhibit a strong preference to sell securities that have increased in value since purchased relative to securities that have decreased in value. Shefrin and Statman introduced this phenomenon in 1985 and termed it the disposition effect. The disposition effect is a puzzling anomaly in finance and frequently associated with lower investment returns. One of the leading explanations for this anomaly is a combination of prospect theory and mental accounting. Conducting a within-subject experiment this study examines the disposition effect in the context of professional traders. Contrary to previous studies this study does not find evidence for the existence of the disposition effect for professional traders. On the other hand, this study finds evidence of the reverse disposition effect after a simple intervention. Moreover, the study examines the disposition effect in the context of long as well as short positions, but no evidence is found that the magnitude of the disposition effect differs between long and short positions. While the disposition effect is often described as detrimental to investment returns, the results of this study suggest that a higher disposition effect is associated with better trading performance. However, this unusual but important finding can be attributed to the mean-reversion property of the underlying security data set.
Health 1 (NALLY)

“Effect of spatial location of calorie information on choice, consumption and eye movements”
Monday 11:00 (NALLY).

Deirdre A. Robertson (Economic and Social Research Institute) with Peter D. Lunn.

Abstract:
A worldwide obesity crisis has led to calls for action by individuals, policymakers and food providers. The World Health Organisation estimated that 2.8 million people are estimated to die annually as a result of obesity. Increased consumption of food purchased outside the home is thought to be one contributor to obesity as consumers may be less aware of the nutritional content of what they consume.

One proposed solution has been to provide nutritional information, such as calories, to consumers at the time of purchase. Nutritional labelling on menus is mandatory in the United States but has not yet been widely implemented elsewhere. One reason may be that evidence for the efficacy is mixed. Some reviews conclude that calorie posting may persuade consumers to choose lower calorie options, but individual studies differ, and many are of insufficient quality to generate strong conclusions.

One reason for the mixed results may be that the format of nutritional information varies widely between studies. In the behavioural literature, calorie posting is referred to as a “salience nudge” – information made salient at the point of decision. As Taylor and Thompson (1982, p.175) defined it “salience refers to the phenomenon that when one's attention is differentially directed to one portion of the environment rather than to others, the information contained in that portion will receive disproportionate weighting in subsequent judgments.” Yet how the placement of calorie information on menus affects the attention it receives remains unknown.

The aim of this study was to manipulate the spatial location of calories on a menu and measure the effects on real choices, consumption, knowledge, satisfaction and attention. We investigated whether calories presented to the left of the price or the right of the price were more likely to affect calories purchased, attended to and consumed. In addition, we used eye tracking methods to assess whether consumers viewed calorie information when it was present and whether this mediated the efficacy of calorie posting on menus.

Methods
We used a “lab-in-the-field” methodology that combined the control of a laboratory study with real-world decisions. N = 142 members of the general public completed a between-subjects 2(Calories vs No Calories) x 2(Calories on Left vs Calories on Right) x 2(Recommended Daily Allowance Displayed vs No RDA Displayed) study. Participants came to the researchers’ institute to take part in a series of unrelated experiments at lunchtime, the first of which involved tracking their eye movements while making decisions unrelated to food. Participants then ordered lunch from a menu designed to look like an online ordering system. Participants were randomised to see one of the 5 menus which varied only in the presence and location of calories and RDAs. Participants’ eye movements were tracked while they chose. When the food was delivered it was weighed and after participants had
eaten the remains were weighed again. Finally, participants completed a questionnaire and were debriefed. The study hypotheses were pre-registered on aspredicted.org.

Results and Discussion
Participants who saw calories ordered 11% (93) fewer calories and consumed 27% (184) fewer calories compared to controls. However, the effect was driven by participants who saw calorie information displayed just to the right of the price. The effects of calorie posting on orders and consumption were mediated by knowledge of the number of calories in the meal. There were no differences between control and calorie conditions on enjoyment. Eye-tracking data suggested that differences in the spatial location may have altered individuals’ search strategies while viewing the menu. These findings may give one indication as to why previous results have been mixed. The spatial position of labels on menus varies widely between studies and has not previously been considered as a moderating factor.

Reducing calorific intake is necessary to tackle the obesity crisis. Solutions will require collaboration between stakeholders including government, the individual and industry. One means of reducing calorie intake may be to present calorie labels on menus, but our results sound a note of caution, the spatial location of labels may strongly influence the likelihood of success.

"Using message framing to promote healthy snack choices among children: An experimental approach"

Monday 11:00 (NALLY).

Jon Benito-Ostolaza (Public University of Navarre) with Rebeca Echávarri, Ariadna Garcia, Nuria Osés-Eraso.

Abstract:
Affecting habit formation to promote children healthy intakes is a crucial task in a world where obesity and overweight are spread. However, encouraging the consumption of fruit and vegetables is a challenge, especially in a context of spread supply and marketing of added-sugar and saturated-fat food. Most of the educational and prevention programs launched from Ministries of Health have a fear-based approach (focusing on health risks if the subject does not adopt the recommended behaviour). But it is not clear if this is an effective approach, especially when dealing with children. In this paper, we present a randomized control trial experiment that allow us to identify the impact of visual information (positive and fear-based) about snack quality on children’s immediate snack choices. Data analysis shows that the average treatment effect of visual messages (either positive or fear-based) is not significantly different from the lack of messages (control group). However, when gender is considered, the average treatment effect of positive visual messages is significantly different from the control group, encouraging the choice of the healthy snack for girls, but not for boys. These results suggest that fear-based messages do not work to promote healthy choices among children. Results also suggest that an educational approach considering gender differences may be necessary since in our study girls seem to more receptive to positive educational messages than boys. Public health interventions directed to children in the area of nutrition should take these results into account.
“The distributional consequences of Hungary’s junk food tax: Evidence from financial satisfaction data”  
Monday 11:00 (NALLY).

**Mona Maier (University of Stirling) with David Comerford.**

**Abstract:**
An important determinant of a tax’s welfare consequences and its political acceptability is whether it has a disproportionately negative effect on the finances of poorer households. Regressivity has been measured in previous research by comparing the proportion of income paid in tax by poorer, relative to richer, households. We argue for a new, more comprehensive measure of regressivity: the effect of a tax on financial satisfaction. The advantage of our approach is that it considers the overall financial situation of households after a tax has been introduced and tax revenues have been redistributed. This is especially important if tax revenues are earmarked for certain projects. We apply this criterion to assess whether the Hungarian Junk Food Tax was regressive. Using a triple difference model, we estimate the impact of the tax on the financial satisfaction reported by non-working, low educated individuals relative to remainder of the population. The results suggest that the overall impact of the tax on the financial situation of this low-income group was in fact more positive than for the remainder of the population. This research contributes to our toolkit on how to assess the impacts of a tax. Additionally, it suggests that junk food taxes need not be regressive.

“Childhood self-control and adult economic outcomes”  
Monday 11:00 (NALLY).

**Michael Daly (Maynooth University) with Liam Delaney, Leonhard Lades.**

**Abstract:**
The capacity to delay gratification and control impulses emerges in childhood and may profoundly shape educational and labour market outcomes. Childhood self-control appears to be malleable and as such has been identified by policy makers as a key prevention target with potential long-run benefits. Despite notable exceptions (e.g. Moffitt et al., 2011) empirical evidence demonstrating links from early self-control to adult economic outcomes remains scarce. There are numerous reasons to expect early life self-control may shape adult financial and occupational success. Work environments require employees to successfully inhibit their impulses and control their emotional expression in order to meet deadlines and avoid potential conflicts with customers and colleagues. Self-control may also enable workers to resist conflicting but desirable activities (e.g., leisure activities or sleep), minimize distractions, and form adaptive routines, thus facilitating the completion of demanding tasks and management of substantial workloads. Indeed, hard work is almost synonymous with self-control, as workers need to exert effort today to achieve valuable future benefits in the form of pay checks, bonuses, and promotions. In the area of savings, putting aside money for retirement is one of the most important decisions in life. However, many people fail to save for retirement despite making plans to do so, and saving rates in industrialized countries remain low. Self-control has been suggested as an important cause of the discrepancy between plans to save and actual saving (Beshears et al., 2015).
In this study we aimed to test how childhood self-control was related to employment, income, and savings data from the 1970 British Cohort Study (BCS; N = 6,675), the 1958 National Child Development Study (NCDS; N = 10,107) and the US National Longitudinal Study of Adolescent to Adult Health (Add Health; N = 2,611). Child self-control was teacher-rated at age 10 in the BCS and at ages 7 and 11 in the NCDS and was self-reported in early adolescence in Add Health. A validation exercise found that the self-control measures in the BCS and NCDS corresponded closely (r > 0.7 unadjusted correlation; r > 0.8 after adjustment for measurement error), with parents’ ratings of their children’s self-control on two contemporary self-control measures: the Brief Self-Control Scale (Tangney, Baumeister, & Boone, 2004) and the Domain-Specific Impulsivity Scale (Tsukayama, Duckworth, & Kim, 2013). Low self-control in childhood was associated with the emergence and persistence of unemployment across four decades in the BCS and NCDS. On average, a 1-SD increase in self-control was associated with a reduction in the probability of unemployment of 1.4 percentage points after adjustment for intelligence, social class, and gender. From labour-market entry to middle age, individuals with low self-control experienced 1.6 times as many months of unemployment as those with high self-control. Analysis of monthly unemployment data before and during the 1980s recession showed that individuals with low self-control experienced the greatest increases in unemployment during the recession across four decades. In contrast, those with high self-control were more likely to save for retirement in adulthood. On average a 1 standard deviation increase in self-control predicted a 4–5 percentage point higher probability of having a pension in middle-age in the BCS and NCDS. Mediation analysis showed that about 50–60 percent of this association is explained by the contribution of self-control to a range of factors (e.g. education, economic status, home-ownership) which were associated with pension uptake throughout adulthood. High childhood self-control also positively predicted socioeconomic status in early adulthood and midlife. On average, a 1-SD increase in childhood self-control was associated with a 0.12 SD increase in adult socioeconomic status as gauged by participant income, social class, home ownership and financial difficulties an effect size comparable to that of a 1-SD increase in childhood cognitive ability (0.17 SD). Further analysis of siblings in the Add Health study showed that the link between early self-control and adult income was robust to adjustment for family fixed-effects. As such, we identified support for childhood self-control as a channel through which individuals may attain higher social standing, both inter-generationally and throughout their own lives. In summary, the present investigation provides robust evidence from three national cohorts that poorer trait self-control is associated with higher unemployment, a reduced likelihood of savings and low socioeconomic status across the life span. Teachers’ ratings of differences in self-control among children as young as 7 predicted economic outcomes more than four decades later. The potential policy implications are considerable: Improving children’s self-control could yield lifelong benefits to these individuals themselves, by raising their standard of living and reducing their danger of being unemployed, and also to broader society, by increasing employment, productivity, and long-term savings. Emerging evidence suggests that self-control and closely related traits may be enhanced by preschool programs, elementary-school interventions, and activities such as yoga or martial arts and meditation exercises (Pandey et al., 2018). The present findings demonstrate the long-range power of self-control in predicting success in life and single out self-control as a potential target for such early intervention programs.
Pensions (DAVIN)

“Lay perceptions about the pension system in Israel”
Monday 11:00 (DAVIN).

David Leiser (Ben Gurion University) with Hernan Rosenblum.

Abstract:
People untutored in economics misunderstand the field in predictable ways, rooted in the mismatch between the human cognitive endowment and economic analysis. Assuming utility maximization is not realistic while financial literacy training is of very limited use, which raises the question of how public policy should adjust to this realization. Further, economic misconceptions affect public policy directly through various mechanisms, some political, some all too human, and do so especially when populists control the economy, as their self-presentation as one with “the people” compels them to embrace simplistic views that resonate with those of the lay public. We will discuss a range of recent examples.

“Three little words? The impact of social security terminology on retirement”
Monday 11:00 (DAVIN).

Francisco Perez-Arce (USC).

Abstract:
We study the impact of changing the existing terminology used to describe the rules governing Social Security retirement benefits. We provided respondents from a nationally-representative online panel with information pertinent to the decision of when to claim Social Security retirement benefits. The content of the information treatments was identical for all respondents, but some were randomly given an alternative set of terms to refer to the key claiming ages (the experimental treatment group) while others were given the current terms (the control group). Despite the minimal nature of the change, there were significant differences in outcome. Those in the treatment group spent less time reading the information but their understanding of the Social Security program improved more than in the control group. In addition, the treatment had the effect of delaying retirement claiming intentions by an average of about two and a half months. Respondents in the treatment group also were more likely to state they would advise standardized characters in hypothetical vignettes to claim later in life. Direct elicitation of all respondents’ preferences also revealed they thought the alternative terms were clearer. The relative gains in knowledge among those exposed to the alternative terms persisted several months after the treatment. These effects are stronger for those with low baseline levels of financial literacy.
Pension fund management
Monday 11:00 (DAVIN).

Sven Hemlin (GRI, School of Business, Economics & Law, University of Gothenburg).

Abstract:
How are pension fund managers performing as investors? This question is vital to all retirement savers who look forward to a positive return on their savings in pension funds. Although pension fund management should be an important issue for research, it is sparsely approached (Coggins, Stewart & Yermo, 2008). We (Jansson, Trönnberg & Hemlin) conducted four studies to find out how pension fund investors are working. This paper summarizes the empirical studies and draws conclusions about pension fund management. Study one found that fund managers (n=64) endorsed investment beliefs about six investment beliefs, namely that markets are not behaving in a fully rational way (Rationality belief), that diversification of risks is beneficial for performance (Diversification belief), that long-term investments increases returns (Long-term investment belief), that taking risks is connected to higher returns (Risk and return belief), that professional investors’ knowledge is needed for performance (Expertise belief), and that risk control is possible (Ability to control risk belief). In a comparative analysis, we found that public fund managers showed stronger support for the Diversification and Risk and return beliefs than commercial fund managers. In critical incident interviews of another set of fund managers (n=22) we found support for all of the six investment beliefs. The second study compared investment beliefs and risk preferences of professional (n=64) and non-professional investors (n=278) in the stock market. Investment beliefs differed between the two groups of investors. All investors perceived the stock market as not very rational, but professionals showed a stronger understanding of the relation between risk and return and had greater confidence in their financial expertise than non-professional investors. To test risk-taking performance, participants, in a survey, selected their preferred distribution of stocks and treasury bonds for investment horizons of three months and two years, respectively. We found that investment beliefs influenced professional and non-professional investors in different ways. Financial expertise led professionals to take more risks, while non-professionals were discouraged from taking risks by the same belief. Professionals’ risk-taking was also influenced by perceived organizational risk norms and by their personal attitude to financial risk, while non-professionals’ risk-taking was affected by their self-confidence and their emotional state. A third study investigated if the influence of financial expertise on stock investors’ ability to predict risk and return is contingent on the length of the forecast horizon. This was done by using a quasi-experimental design where stock market professionals (n1=63, n2=36), private share-holders (n1=155, n2=172) and students (n1=124, n2=90) on two occasions provided their short (3-months) and long term (2-years) risk and return predictions on stock indices. In general, participants performed better in risk than return predictions and in the long-term. We found that professionals did not perform better than private share-holders and students in predictions of return on investments. In fact, professionals were worse than the two other groups in predicting returns. However, the level of financial expertise positively influenced how accurate they were in risk predictions. Professional investors performed better in the long-term than students. We also measured confidence in predictions and found that generally participants were overconfident irrespective of expertise.

Finally, we wanted to understand better how fund managers in pension funds think and reason when they make investment decisions. To that end we conducted critical incident interviews with...
fund managers (n=22) to explore how they considered their day-to-day investing activities. We collected more than sixty investment decisions reported by the fund managers as critical. These decisions comprised thoroughly analysed investments in stocks and funds. However, it was evident that fund managers were not completely rational, since we found reports that showed the use of heuristics, intuitive thinking, sunk cost effects and unwarranted social influences in their daily investment decisions.

We draw a number of conclusions of pension fund management from the four studies. First, beneficiaries of pension fund managers work efforts that is people in general, may be in a better position to evaluate pension funds if they have more knowledge of pension fund managers’ investment beliefs. Secondly, pension funds should display their risk norms and policies and impose them on their fund managers whose task is to invest money. Lay people who are interested in investing their private savings are advised to increase their ability in financial risk-taking by acquiring basic financial knowledge and keeping control of emotional drives. Thirdly, results imply that people should be aware of what they may gain from seeking advice from financial experts. They will get little help if they need investment advice of stocks over a couple months. However, if someone wants to invest money over some years it may well be advisable to contact a stock market professional since s/he may be efficient in risk control and thereby improve risk adjusted return on her/his invested money. Fourthly, we conclude that fund managers perceive difficulties in their investment decision making that generally are professionally managed, but also include thinking tools and biases that are common to people in general. Finally, on a theoretical note we conclude that financial expertise is not superior to laymen knowledge in financial market predictions, but better at judging financial risks.

“Who owns the savings in the family? Joint and individual financial assets”
Monday 11:00 (DAVIN).

Merike Kukk (Tallinn University of Technology, Estonia) with W. Fred van Raaij.

Abstract:
In this paper, we investigate the ownership of financial assets within a family and how pooling affects individual savings of the partners. We use anonymized monthly transactional data from ING Bank observing financial data of Dutch couples in 2014-2016. We find that in more than half of households, savings are not equally allocated and in a substantial share of these households, one partner does not own an individual account. However, there are no systematic differences across gender. The estimations show that the more households pool, the larger are the differences in individual financial assets of partners, suggesting that agreement on joint savings does not lead to a more equal share of individual savings but the opposite. The effect is more pronounced for households in their 20-s and for savings accounts. The results of the study highlight the need to understand the decision-making process of a family about the sharing rule applied to savings.
Biases & decisions 1 (SUITE 679)

“Incentives, performance and choking in darts”
Monday 11:00 (SUITE 679).

Bouke Klein Teeselink (VU amsterdam) with Rogier Potter van Loon, Martijn van den Assem and Dennie van Dolder.

Abstract:
This paper examines the effect of incentives on the performance of darts players. We analyse four data sets comprising a total of 123,402 darts matches of professional, amateur, and youth players. The game of darts offers an attractive natural research setting, because performance can be observed at the individual level and without the obscuring effects of risk considerations and the behaviour of others. We find that amateur and youth players perform better under moderately higher incentives but choke when the incentives are really high. Professional players similarly display better performance under higher incentives but appear less susceptible of choking. These results speak to a growing literature on the limits of increasing incentives as a recipe for better performance.

“Gripping the reins: Is there an endowment effect for power?”
Monday 11:00 (SUITE 679).

Gigi Foster (University Of New South Wales) with Matt Nagler.

Abstract:
The dynamics of political power depend on the incentives and motivation to acquire and hold power, and as such these constitute a critical object of study in political economy. In this study, we experimentally quantify the endowment effect applicable to the interpersonal power created in two standard lab games and compare our estimate to the endowment effect estimated for tangible items. In the dyadic Dictator game, an interpersonal power difference is created by the difference between the control of the dictator, compared to the lack of control of the receiver, over the initial endowment. In the dyadic Public Goods Game, we operationalize power by giving one subject the ability to punish or reward the other conditional on the other’s contribution level. The subjective experience of power is verified via surveys in each case. We use the BDM mechanism to elicit willingness to pay for a random half of subjects, and willingness to accept payment for the other half of subjects, for the power that materializes in each game type, and use these numbers to estimate the endowment effect for power.

The endowment effect (EE) has been thoroughly tested for tangible goods such as mugs, pens, chocolate bars, cans of coke, highlighters, letter openers, trading cards, binoculars, lottery tickets (Knetsch and Sinden 1984, Knetsch 1989, Kahneman et al. 1990, Bateman et al. 1997) and a multitude of other items. It has also been observed for what one might consider as semi-tangibles such as romantic dates, public goods, public land, and environmental, health, and safety regulations (Nataf and Wallsten 2013, Ortona and Scacciati 2003, Buccafusco and Sprigman 2010, Hammack and Brown 1974) and for entirely intangibles such as time, intellectual property, and academic chores (Ortona and Scacciati 1992, Horowitz and McConnell 2002, Galin et al. 2006).
The EE has been found to be present in markets with purely intangible goods (including intangible payment mechanisms) (Galin et al. 2006), but the magnitude of the effect is significantly smaller than what is seen in the standard literature for tangible goods. Subjects have also been found to consistently demand a higher price for performing house and academic chores than they would be willing to pay others to perform the same chores for them, indicating the presence of the EE for valuation of time (Hoorens et al. 1999).

Few authors have indirectly investigated the effects of power on the EE, and none to our knowledge have investigated whether the EE holds for power as a commodity. Authors of a recent study claim to be the first to explicitly link the power literature with the EE, but they consider power only as a potential moderator (Chan 2018). Their key findings are that that feelings of power reduced sellers’ asking prices but increased buyers’ willingness to pay. Furthermore, they observed the EE, but only under ‘low power’ conditions. Under high power conditions, they found a reversal of the EE, with buyers placing a higher value on the good under transaction than sellers. The effects found in Chan and Saqib 2018 imply that those with high power want to abdicate it and those with low power overvalue it, exhibiting an EE. This would be consistent with viewing power as a “bad”, or a “valence loss” (Brenner et al. 2007). Hence the direction of the EE may be opposite to what one might expect by viewing power as a positive gain, akin to a tradeable good, like a mug. Prior authors have suggested explanations for the EE that relate to both an ownership effect and loss aversion. While there has been an observed gap between willingness to pay and willingness to accept for items both tangible and intangible, science as yet has no unified theory that can deliver exact empirical predictions about the existence and strength of the endowment effect for different types of tangible and intangible goods. In related work, we are building toward such a theory. In the present paper, we fill a gap in the experimental literature by testing for the existence and strength of an endowment effect for power. Following Bose et al. (2018), we use multi-round simultaneous play of customized versions of two dyadic standard experimental games, the Dictator game and the Public Goods game, both workhorses of the experimental economics literature. All sessions start with a real-effort task as Stage 1 that enables subjects to earn the endowment for the later stages. Stages 2, 3, and 4 consist of customized versions of the Dictator game, the Public Goods Game, and the standard endowment effect elicitation game using a tangible good (specifically, a mug). In each of these stages, subjects play both roles of the game simultaneously: in the Dictator game they play as both dictator and receiver, with two different partners; in the Public Goods game they play as “gendarme” (the player with the power to reward or punish the other one depending on the other’s contribution) and as the “citizen” (without power to reward or punish, but potentially rewarded or punished by the gendarme), again with two different partners. We estimate the endowment effect for power following the standard calculation algorithm: the ratio of the willingness to accept to the willingness to pay (WTA:WTP) for a good – in this case, the mug or power, depending on the stage of the experiment. The experiment concludes with a demographic questionnaire. This design enables both within- and across-subject analysis. It enables us to estimate the endowment effect of two different forms of power based on data from each subject in the two different game scenarios and compare these estimates to the endowment effect estimated for the tangible mug. Using answers to the questionnaire, we can also perform between-subject analysis of the individual characteristics that may impact the size of the endowment effect and how much power is valued.
“Dynamic choice with status quo bias: Theory and design of efficient experiment”
Monday 11:00 (SUITE 679).

Hassan Nosratabadi (Université catholique de Louvain) with Francois Maniquet.

Abstract:
We study a model of decision making in which choice situations come in a specific order and the decision maker displays the following status quo bias: she sticks to her previous choice whenever it is still available, except if a new alternative is obviously better. As a result, only changes in the chosen alternative along the choice sequence reveal preference. We show that the resulting dynamic status quo biased choice model is characterized by the strong axiom of revealed preferences along with the weak axiom of revealed obvious preferences. Finally, we show that, provided the number of alternatives is sufficiently large (at least 5 alternatives), the length of the minimal sequence of choice situations needed for extracting unique preferences is not larger under status quo bias than under rationality.

“Gender differences in performance under time constraint: Evidence from chess tournaments”
Monday 11:00 (SUITE 679).

Maryam Dilmaghani (Saint Mary's University).

Abstract:
The economic literature on the consequences of time constraint for decision making is slim and has mainly relied on laboratory collected data. Within this literature, only few studies have investigated the gender differences in the effects of time constraint on decision making. The World Chess Federation reports the official player ratings in Standard, Rapid, and Blitz chess. Standard, Rapid, and Blitz chess only differ from each other in the stringency of the time constraint they impose on the players. While Standard chess lasts several hours, Blitz chess allocates each player 10 minutes or less for the entire game. The present paper uses 2012 to 2018 chess tournament data to investigate the gender differences in the effects of time constraint on performance. The cumulative number of observations is above 1.5 million individual chess players. The paper employs quantile regression corrected for sample selection. The results indicate that Rapid and Blitz ratings of female chess players are below that of male players of the same skill levels. Hence, the present paper provides additional evidence for the detrimental effects of time constraint on female performance in competitive environments.
Labour market (SUITE 686)

“Rabbits and study habits: A field experiment on pacesetters and student effort”
Monday 11:00 (SUITE 686).

Gert-Jan Romensen (University of Groningen).

Abstract:
Many students perform below their academic potential due to a lack of study time. Attempts to increase study time are often hindered by poor measurement of effort and the absence of information on students’ initial study plans. In a field experiment with 573 university students, we elicit detailed weekly study goals and plans from students and use these to construct individualized pacesetters (rabbits). Pacesetters are moving reference points that visualize the preferred study pace of the present self by moving exactly according to the initial study plan. We build a new educational technology to measure effort and to display the pacesetters to students in real time. We find that students have more ambitious study goals when they can set their own pacesetter, but are subsequently less likely to reach the goal by the end of the week. The pacesetter has no impact on study time, nor does it improve learning outcomes. We discuss treatment heterogeneity based on: gender, ability, and procrastination.

“Who you know or what you know? Job search and matching in the presence of patronage”
Monday 11:00 (SUITE 686).

Jamelia Harris (University of Oxford).

Abstract:
Using primary data collected in Sierra Leone, I explore the role of networks in the labour market for university graduates. Networks are considered in relation to homophily which can arise from ethnic, political, institutional or social connections. I develop an analytical model to explore the search behaviour of firms and job-seekers in the context of networked search and patronage. Empirical data show that political and ethnic networks are the two most dominant in the labour market. Firms and job-seekers at the individual level, opt to utilise networks to maximise individual benefits, but this is costly to the labour market as a whole as the information set is distorted and sometimes reduced, and search is likely lower. Networked search combined with patronage therefore introduces a friction into to the labour market by preventing employers and jobseekers from freely interacting with each other. Job-seekers respond to patronage by updating their beliefs on the fairness of the labour market, searching probabilistically and increasing applications to fairer sectors and organisations. In Sierra Leone, the perceived fairer sector is the development sector. Thus, the result is higher demand for jobs at NGOs, INGOs and donor organisations by high ability workers who are not highly connected.

Previous research has considered social networks and job referrals in obtaining employment, primarily focusing on the benefits. Such networks have been viewed as a mechanism of search or a means of securing employment. I do not argue that networks are not advantageous to increasing the candidate pool if a recruiting organisation uses the networks of their employees (and their networks’ networks) to advertise vacancies more broadly. Or if job-seekers utilise their network to obtain a
meaningful referral letter which gives a positive signal to the recruiter. There is evidence that the use of networks in such settings have led to matching in the labour market. This paper takes this as given but asks two related research questions:

(i) How does the existence of such networks, and homophily more broadly, affect decision-making and behaviour in the labour market?
(ii) Is the observed outcome an optimal outcome for the labour market? In so doing, the paper establishes homophily as a matching friction in the labour market.

Throughout this paper, I refer to a firm or job-seeker that is networked or connected. I define being networked or connected as having a link based on political affiliation, ethnicity, common familial or social group, or common institutional affiliation. A firm is connected to job-seekers if they can draw on a pool of job-seekers from within their network without advertising. A job-seeker is connected to a firm if he/she is able to utilise a contact point within the firm or someone associated with the firm to improve the chances of his/her application being considered. Importantly, this connection is in most cases, independent of the job-seeker’s ability to perform as an employee. I argue that once there is a proportion of firms in the labour market that recruit based on networks/connections rather than ability only, a higher proportion of low ability workers will be hired. A negative externality results and the outcome in the labour market is less than what is socially desirable.

Once job-seekers perceive some proportion of firms to be unfair, with each unsuccessful application, they update their prior information/beliefs based on evidence from their search process, as well as the success or failure of others around them. The unemployed job-seeker uses this data to update their subjective probability of gaining employment. The process is iterative, and perceptions are updated after each vacancy is observed. There is a tipping point. At some point, the unemployment job-seeker shifts their search to other sectors with a higher perceived probability of success, attempts to build networks and become connected or ultimately becomes discouraged and exits the labour market altogether. The end result is a probabilistic approach to decision making where workers match not on the most compatible or desired job, but on the job that they believe they have a higher probability of acquiring.

Ultimately, the individual quest for employment/finding a candidate by using connections changes the fabric of the labour market and the level of confidence agents have in the recruitment process. Observed and reported individual behaviour reveal individual clustering to various groups/networks and deliberate efforts to become connected and use networks. Despite this observed behaviour, respondents regard the use of such “connections” are as disadvantageous and harmful to the labour market collectively. As Schelling (1971, p.144) notes, “the active choice is more like congregation than segregation”; but in effect, as agents form and utilise networks based on homophily, an insider-outsider situation is created where the connected are insiders and the unconnected are outsiders.

The analysis in the paper will largely focus on the job-seeker side of the problem; but also draws on the firm’s decision. Primary data for the analysis is drawn from Sierra Leone. Sierra Leone provides an apt case study as few advertised vacancies are observed, there is little hiring in the formal private sector and labour productivity may be lower than potential. Alongside this, there are many university graduates in the labour market. This allows the existence of established frictions in the market to be investigated, while also exploring new ones. The data used in this paper was collected between August 2017 and August 2018 using a combination of survey, interviews and focus group
discussions. The general approach of the paper utilises a mix of analytical models, complimented by primary quantitative and qualitative data. The overall analysis is an iterative one, with the primary data informing the set-up of the analytical models; while simultaneously giving empirical backing to some of the behavioural predictions of the analytical models.

“Does expertise and thinking mode matter for accuracy in judgments of job applicants’ cognitive ability?”

Monday 11:00 (SUITE 686).

Samantha Sinclair (Linnaeus University) with Jens Agerstrom.

Abstract:
The present research examined the role of thinking mode for accuracy in recruiters and laypeople’s judgments of applicants’ cognitive ability. In Study 1, students who relied on their intuition were somewhat less accurate. In Study 2, an experimental manipulation of thinking mode (intuitive vs analytical) revealed no apparent differences in accuracy. Moreover, there were no differences in accuracy or agreement between recruiters and laypeople. Examination of the use of specific resume content suggested that intuitive thinking corresponds to basing one’s judgments more on the way that applicants present themselves in their personal letter and less on diagnostic biodata such as SAT scores. The findings point to the possibility that professional recruiters may not possess intuitive expertise in this context.

“Nudging and empathizing in the classroom: How behavioral economics made me a better teacher”

Monday 11:00 (SUITE 686).

Natalia V Czap (University of Michigan-Dearborn).

Abstract:
The purpose of this paper is to discuss the lessons that I have learned from teaching behavioural economics and how these have helped me to become a better and more confident teacher. These lessons are based on the behavioural science insights about human behaviour. Teaching behavioural economics helped me to understand how people learn, why they make mistakes, what motivates them, and how to use these insights in designing and running my classes. These lessons come from 5 areas: (1) heuristics and biases, (2) prospect theory, (3) mental accounting, (4) empathy, (5) cooperation. These lessons helped me to empathize with the students and design better incentives and nudges for them. These changes helped me to connect with the students and become a more confident and ultimately better teacher.

There is no shortage of books that offer suggestions on how to improve learning outcomes of students. Universities and colleges typically have their own teaching and learning centres that offer workshops and consultation that train faculty to become a better teacher. These resources are invaluable in helping junior faculty and I have diligently attended them and used the tools they suggested. While these resources provide a toolkit of becoming a good teacher, they may not be enough to change the individual self-assessment as a teacher and satisfaction with teaching. It is not
until I started to make connections between the content in my behavioural economics class and how I teach, that I felt confident while teaching.

Some faculty are born talented/intuitive/charismatic teachers. These instructors start earning high teaching evaluations from their first semester in the classroom; they are loved and followed by students from one course to another; they win teaching awards, and you hear students talking about them before you begin your class. Many others struggle for years to get to the level of teaching success where they feel comfortable and where they do not feel stressed and disappointed every time, they open their teaching evaluations file for the previous semester. They can be doing “everything right”, following the teaching workshop recommendations, but still falling short of a “I am a good teacher” self-assessment.

Before I start discussing the lessons from behavioural economics, I will present my teaching philosophy. My teaching philosophy is not to deliver the content or make the students master the material, but rather to teach students how to learn and to help them learn. When I was an undergraduate student, knowledge was not nearly as freely available to almost everyone. During the pre-internet era, the teachers often were the only ones who had access to knowledge and their task was to disseminate that knowledge to their students. Nowadays the knowledge-bringing aspect is almost obsolete as the student can easily and quickly find resources online. What the students of today need is to learn to apply this knowledge in real life and in circumstances different from the ones presented during their studies. This calls for the professors who are designers of learning.

In this paper I will discuss each of the five areas of behavioural economics mentioned above and explain how I am using them in my teaching. The next section will discuss heuristics and biases. Specifically, it will talk about Systems I and II (Kahneman 2011), the influence of anchoring effect, availability and representativeness heuristics, and the power of framing. The following section will be devoted to prospect theory and using reference points and harnessing loss aversion in teaching. The section after that will discuss mental accounting, including time budgeting, self-control, segregation of gains and integration of losses. Next, we will discuss how empathy may help connect with the students. The section on cooperation within the students and between the students and professor will be followed by the conclusions.
Social behaviour 1 (SUITE 688)

“(Mis)Perceptions about immigration and voting behavior”
Monday 11:00 (SUITE 688).

Pierluigi Conzo (University of Turin & Collegio Carlo Alberto) with Davide Belluci, Roberto Zotti.

Abstract:
A growing number of studies have found significant effects of inflows of migrants on electoral outcomes. However, the role of perceived immigration, which in many European Union countries is above official migration statistics, is overlooked. This paper investigates the effects of perceived threat of immigration on voting behaviour, by looking at whether local elections in Italy were affected by sea arrivals of refugees before the election day.

While, upon arrival, refugees could not freely go to the destination municipality, landing episodes were largely discussed in the media before the elections, thereby influencing voters’ perceptions about the arrivals. We develop an index of exposure that varies over time and across municipalities depending on the nationality of the incoming refugees.

This index captures the impact of perceived immigration in voting behaviour, on top of the effects of real immigration as proxied for by the stock of immigrants and proximity to refugee centres. Results show that, where refugees are more expected to arrive, participation decreases, whereas protest votes and support for extreme-right, populist and anti-immigration parties increase. Since these effects are driven by areas with fast broadband availability, we argue that anti-immigration campaigns played a key role.

“Experiencing booms and busts in the welfare state and preferences for redistribution”
Monday 11:00 (SUITE 688).

Kerstin Hansen (University of Basel) with Alois Stutzer.

Abstract:
Recent empirical evidence documents a direct positive effect of experiencing macroeconomic shocks during the so-called impressionable years (i.e., age 18 to 25) on preferences for redistribution in adulthood (Giuliano & Spilimbergo, 2014). We ask whether this relationship is moderated by the social security net at the time. Specifically, we examine whether individuals’ experiences with the welfare state during booms and busts affect preferences for redistribution, for example, by buffering the perceived individual consequences of macroeconomic shocks. Using large repeated cross-national data series, we explore this question in an age-cohort panel setting by taking the generosity of welfare state benefits into account when estimating the effects of macroeconomic shocks during the formative years on preferences for redistribution. Further, we test whether any observed differences in support of redistribution are driven by instrumental demand or notions of solidarity, which are often emphasized in the European political debate on redistributive policies.
“Do minorities misrepresent their ethnicity to avoid being discriminated? Experimental evidence from Georgia”

Monday 11:00 (SUITE 688).

Philipp Lergetporer (IFO Institute Munich) with Nikoloz Kudashvili.

Abstract:
Discrimination against minorities is pervasive in many societies all around the world. Over the past decades, an impressive body of research in economics and related fields has documented discrimination in various market- and non-market settings (for surveys of the field-, lab-, and non-experimental literature, see Arrow (1998), Yinger (1998), Altonji and Blank (1999), Riach and Rich (2002), Anderson et al. (2006), List and Rasul (2011), Bertrand and Duflo (2017)). Discrimination can be based on different attributes of the discriminated groups (e.g., ethnicity, gender, or religion), and materializes in decisions related to hiring, pricing, letting, or allocating attention (e.g., Bartos et al. (2017)). The literature so far has mainly focused on majority-group members’ decisions to discriminate, e.g., by studying the existence and consequences of discrimination, or the effectiveness of anti-discrimination policies. In contrast, minorities’ behavioural responses to discrimination have received little scholarly attention so far. In particular, very little is known about what strategies minority-group members apply to circumvent anticipated discrimination, and about the effectiveness of these strategies. This is the research gap which we address in this paper.

We focus on minorities’ strategic misrepresentation of ethnicity to avoid being discriminated. Existing models of discrimination assume that minorities’ ethnic affiliation is perfectly observable. In reality, however, majority-group members often only observe a noisy signal of ethnicity, and minority-group members have some discretion over what ethnicity-revealing signals to send. For instance, job applicants can decide whether to include racial cues in their resumes (Kang et al. (2016)), students can decide whether to perform rituals which identify their religious affiliation (Lavy et al. (2018)), car dealers can decide whether to reveal their typical ethnic names in their advertisements (Zusmann(2013)), and immigrants can decide whether to adopt typical names of the host-country population (Arai and Thourasie (2009), Biavashi et al. (2017)). Descriptive and anecdotal evidence for minorities’ ethnicity-signalling behaviour abounds, but its causes and consequences have not been studied experimentally yet.

We study minorities’ strategic signalling behaviour in the context of the marginalized Armenian minority in the country of Georgia. Georgia provides an ideal setting for two reasons: First, like in many other societies, names are unambiguous identifiers for ethnicity. Second, recent historical accounts suggest that some Armenians adopted Georgian-sounding names to avoid discrimination.

We conduct a framed field experiment (Harrison and List (2004)) with a total of 758 high school students in Tbilisi, Georgia. We use a modified version of the trust (or “investment”) game (Berg et al. (1995)) as our vehicle to measure discrimination. The trust game is a two-player game in which the first player (“trustor”) is endowed with a fixed amount of tokens, and has to decide how many tokens, if any, to transfer to the second player (“trustee”). The experimenter triples the transfer and hands it over to the trustee, who then decides how many of the received tokens, if any, to transfer back. Back transfers are not tripled. We are particularly interested in trustors’ transfers since they determine overall efficiency in the game.
Building on Fershtman and Gneezy’s (2001) seminal paper, we implemented four between-subject treatments in which first names serve as indicators for interaction partners’ ethnic affiliation. In treatment G-G (G-A) players are informed that the trustor is Georgian (Georgian) and the trustee is Georgian (Armenian). The third treatment, G-A Signal, is identical to treatment G-A, except that Armenian trustees can send a message to the Georgian trustor before decisions are made. The trustee can decide between sending (i) a truthful message signalling that her name is ethnic Armenian, (ii) an untruthful message signalling that her name is ethnic Georgian, or (iii) no message. The fourth treatment A-A Signal is identical to G-A Signal except that the trustor is Armenian.

We have three main findings. First, there is pronounced discrimination of Georgian trustors against Armenian trustees: While trustors transfer on average 5.2 tokens in treatment G-G, transfers are significantly lower by 1.2 tokens in treatment G-A (p<0.01). Second, Armenians anticipate this extent of discrimination, and react to it by misrepresenting their names: In treatment G-A Signal, 43 percent of trustees send the untruthful message that their name is Georgian. The fact that none of the Armenian trustees sends this message when the trustor is also Armenian (treatment A-A Signal) shows that minority members use the signalling device strategically to avoid discrimination. Third, Armenians’ signalling behaviour is effective in reducing discrimination: On average, the magnitude of trustors’ discrimination reduces by half when moving from treatment G-A to treatment G-A signal. We do not find any discrimination against those Armenian trustees who misrepresent their ethnicity in treatment G-A signal. Scrutinizing the underlying mechanisms of these effects, we suggest that the signal alters trustors’ transfers by raising their expectations about trustee’s back transfers. To our knowledge, this is the first experimental evidence on the prevalence and effectiveness of minorities’ strategic name-signalling behaviour to avoid discrimination.

“Immigration, poverty and demand for redistribution: Causal evidence from a survey experiment”
Monday 11:00 (SUITE 688).

Andrea Martinangeli (Max Planck Institute for Tax Law and Public Finance) with Lisa Windsteiger.

Abstract:
Immigration has been the main topic in almost every election campaign taking place in Europe over the last few years, often leading to the rise of extremist and populist parties. The loss in support suffered by traditional parties might in part be due to immigration not being central to their political agenda despite its importance for the electorate. Traditional topics (welfare and redistribution) fail moreover to trigger strong emotional responses in comparison to immigration. Finally, immigration per se is often found to erode support for redistributive policies among the native electorate (see e.g. Cappelen and Midtbo (2016), Eger (2009), Larsen (2011)). We enter a nascent stream of literature investigating the link between immigration and support for redistribution (see Schmidt-Catran and Spies (2016), Auspur at al. (2019)). The existing literature advances opposing hypotheses concerning the direction in which immigration should affect natives’ demand for redistribution. The conflict hypothesis posits that the increase in ethnic heterogeneity accompanying immigration reduces social cohesion (Alesina and Glaeser (2004)), lowering support for redistribution among natives (Luttmer, 2001). The protection hypothesis posits that (low-skilled) immigration depresses wages and job security of natives in high-immigration sectors. Consequently, low income earners increase their demand for redistribution while well-earning, high skilled
individuals - net contributors to the welfare system - withdraw their support for redistribution in response to migration.

Experimental survey studies have emerged as an important investigation strategy. Respondents are primed and/or informed about immigration in their native countries and then asked about their demand for redistribution (Alesina et al. (2018), Naumann and Stoetzer (2018)). A general finding is that immigration tends to reduce support for redistribution in the native population.

The survey-experimental literature mimics election campaigns and the associated media debates by inducing and exacerbating the typical salience of immigration and studying its effects on self-reported support for redistributive policies. The evidence mentioned above suggests that a political debate focussed on immigration harms parties typically campaigning for redistribution and income support. Immigration is however not the only topic in political discussions. To the best of our knowledge, no investigation has so far studied how the interplay of immigration and poverty affects demand for redistribution. Our experimental survey design aims at investigating this question. We therefore investigate the net effect of information on immigration and on poverty on support for redistribution. Concretely, we randomise whether individuals receive no information (condition NEUTRAL, our baseline), information on the extent of immigration (condition IMMIGRANT), the extent of poverty (condition POOR), or the extent of both (condition BOTH) prior to stating their preferences for redistribution in a 2x2 information design. In order gain a better insight into how poverty and immigration interact, we design a further intervention adding information about the extent to which the poor and the immigrants overlap (condition OVERLAP).

Our main object of interest is the final effect of condition BOTH on demand for redistribution: In a political debate in which both immigration and poverty play a role, what happens to people’s support for redistribution? Supposedly, the effect is a combination of the two effects of informing people about immigration or poverty only. For instance, assuming that conditions POOR and IMMIGRANT affect demand for redistribution in opposite directions, the net aggregate effect in condition BOTH will reflect which of the two issues weighs more in people’s decisions. Condition OVERLAP fixes the believed extent to which the groups overlap.

We find that while poverty has no detectable impact on demand for redistribution expressed in desired tax rates on the top 1% income earners (though a positive impact is detected on support for education programmes), immigration has a sizeable negative impact. Such negative impact is not corrected by the simultaneous presentation of information about poverty. We find strong heterogeneous effects with respect to the respondent’s education level. The entire effect on preferred top tax rates is driven by respondents without college education, while college educated individuals drive the entire effect on demand for education following the poverty information. Finally, we confirm previous studies in that we find subjects react to the mere fact of "mentioning" immigration rather than to the provision of exact figures. We can conclude that the salience of immigration far outweighs that of poverty in the political and social debate for the non-college educated, and that non-fiscal measures to reduce inequality are preferred by high-skilled individuals.
“Intrinsic vs. extrinsic motivators on creative collaboration: The effect of sharing rewards”
Monday 11:00 (SUITE 687).

Giuseppe Attanasi (Université Côte d'Azur, Nice (GREDEG)) with Ylenia Curci; Patrick Llerena; Giulia Urso.

Abstract:
As well expressed by Scott (2010), the notion of creativity is inevitably caught between two polarities, one psychological (individual creativity), the other sociological (collective creativity). On the one side, creativity resides in the personal endowments and capacities of individuals: some have the native talent and/or acquired know-how for certain kinds of creative acts; some have little or none. On the other side, creativity is also embedded in concrete organizational contexts that shape its motions and objectives in many different ways. Two important variables have been shown to impact on the creative processes within different organizational modes: financial incentives and peer effects. About the former, Charness & Grieco (2018) propose to undergraduate students in Economics, at an individual level, two kinds of creative assignments: “close” and “open” creativity. In the former case, ex-ante goals and constraints are imposed, as is usually the case for most of the economically relevant creative activity (such as finding a way to decrease the size of a computer or developing a new drug for a specific purpose). In the latter case, no restrictions apply, so “thinking outside the box” should be more natural. Participants are randomly given one of three creative assignments – mathematical, graphical and verbal – under tournament incentives on the specific assignment, with monetary rewards to the winners only in half of the experimental sessions. Charness & Grieco (2018) find that financial incentives have a positive impact on creativity, but only in the case of “close” creativity, i.e. when there are some constraints to the task that a subject has to accomplish. In this paper, we build on the same “close” creativity assignments of Charness & Grieco (2018) and analyze – with undergraduate students in Economics (in the lab) and with creative entrepreneurs (in the field) – the interplay between monetary incentives and within-group cooperation vs. within-group competition in three types of “creative” tasks – mathematical, graphical and verbal. More precisely: 120 undergraduate students in Economics of University of Strasbourg participated in the lab experiments in 2015-2016, and 120 experts in creativity (professionals, entrepreneurs) operating in the region of Strasbourg participated in the corresponding lab-in-the-field experiments, during two major events organized in Strasbourg (Ecole d’Automne 2015, Tango & Scan 2016). We have four treatments (30 students and 30 entrepreneurs for each treatment): “Individual (Control)”, “Group with no monetary incentives to either cooperation and completion”, “Group with monetary incentives to cooperation”, “Group with monetary incentives to cooperation and competition”. We find more creativity in cooperative groups than (in competitive groups and) individually only when no monetary incentives are provided to group cooperation (sharing ideas) in the creative assignment. Therefore, while the results of Charness & Grieco (2018) show a positive interplay between monetary incentives (extrinsic individual motivation) and “close” creativity at the individual level, we provide evidence of a negative interplay between monetary incentives and “close” creativity at the group level (intrinsic group motivation; see Festré & Garrouste 2014). Furthermore, the latter effect is found more in the experimental sessions with creative entrepreneurs than in those with undergraduate students.
Finally, psychological factors (risk attitudes) and geographical factors (cultural association, openness to others, cultural association) usually found to stimulate creativity only impact on the creativity produced in the laboratory experiments by undergraduate students: for creative entrepreneurs, we only detect a treatment effect. We provide an interpretation to this result: being creative entrepreneurs already “creative” due to their professional activity, what matters for their (additional) creativity is only the “right” organizational mode, i.e. the one boosting their intrinsic motivation to be creative. And we find this organizational mode to be the one that allows them to accomplish their own individual creative task by cooperating in groups (i.e., sharing ideas) with no monetary incentives to ideas sharing.

“A comparison of the traditional and sharing economy hospitality industry: The difference in generalized and direct reciprocity”

Monday 11:00 (SUITE 687).

Eva Hofmann (WU, Vienna University of Economics and Business) with Barbara Hartl, Erik Hoelzl, Eva Hofmann, Sarah Marth, Thomas Sabitzer.

Abstract:
Recent years have seen an impressive rise of the so-called, sharing economy “, characterized by the fact that consumers have access to a good rather than actually owning it. Consumers started sharing goods such as cars (e.g., Drivey), rooms (e.g., Airbnb) and self-produced vegetables (e.g., community gardens). This is a new trend that was (partly) driven by the rapid development of technology, namely the Internet and mobile phones apps. Although “sharing economy” acts as an umbrella term, covering access-based economy, platform economy and community-based economy, technology plays an important role in almost all forms organizing sharing by fostering exchange and communication within the sharing economy. Nevertheless, although technology plays a central role, human interaction is key for the sharing economy.

Thus, mutual trust and reciprocity characterize economic transactions in the sharing economy. Previous research suggested a higher level of reciprocity in the sharing economy than in traditional economic settings. In this paper, we distinguish between generalized and direct reciprocity. Generalized reciprocity means that individuals who have received a favour feel obliged to return this favour to the general community. Direct reciprocity means that individuals who have received a favour feel obliged to return this favour to the specific person from whom they received the favour. In the current paper, we examine whether generalized and direct reciprocity are stronger in the sharing economy than in the traditional economy. To test this hypothesis, we conducted three studies combining different methods and contexts.

(1) In the first study, we used a qualitative approach. We are currently conducting a template analysis of 100 randomly chosen reviews at platforms typical for the sharing economy and the traditional economy. We analyse reviews written by users of the platforms Airbnb and booking.com, two hospitality platforms that enable users to get in touch and book with either private persons offering their housing to holidaymakers (Airbnb) or hotels proposing their rooms (booking.com). We expect the template analysis to show that in Airbnb reviews more direct reciprocity (credits to the host) and more generalized reciprocity (recommendations for other fellow users of the accommodation) is mentioned than in booking.com reviews. We also assume that consumers put
more effort in the writing of Airbnb reviews than in booking.com reviews, so that Airbnb reviews are more elaborate.

(2) In the second study, we administered a questionnaire to representative samples in Germany (604 participants) and the UK (614 participants). The questionnaire assessed the prevalence and the reasons to write reviews for Airbnb and booking.com. We find that 20% (Germany) and 22% (UK) of participants have been using the platform Airbnb to book accommodation, while 43% (Germany) and 37% (UK) of participants have been using booking.com to book hotel rooms. Additionally, of these guests 36% (both Germany and UK) wrote a review for Airbnb about their stay, and 25% (Germany) and 27% (UK) wrote a review for booking.com. Based on a template analysis on participants’ open-ended answers about reasons to write a review we see that for both platforms generalized reciprocity (recommendations for other fellow users of the accommodation) is of importance, but that direct reciprocity is more relevant at Airbnb reviews.

(3) In the third study, direct and indirect reciprocity in sharing economy and traditional settings was studied in a 2 x 2 experimental design with a convenience sample of 115 persons who used Airbnb and booking.com to book an accommodation previously. Participants imagined a scenario about an accommodation they had booked via Airbnb or booking.com. They then were asked to write a review addressed either to the community (of booking.com or Airbnb; generalized reciprocity) or to the specific host (hotelier for booking.com or host for Airbnb; direct reciprocity). As in Study 1, we examined the effort put into returning the favour as a measure for reciprocity. Counting the number of words written in the reviews, we find that indeed participants put significantly more effort into the Airbnb reviews than in the booking.com reviews. There is no difference between direct and generalized reciprocity. Additionally, the template analysis of the content of the reviews revealed that reviews content-wise do not differ a lot between the different four conditions.

Overall, we find that the studies confirm the claim that there is more reciprocity in the sharing economy than in the traditional economy. Based on study results from a template analysis of actual reviews on a sharing economy and a traditional platform, a representative study in Germany and UK, and an experiment, we conclude that direct and generalized reciprocity are more important in the sharing economy than in the traditional economy. Implications for providers of hospitality services are that traditional providers need to invest relatively more effort to stimulate customer reviews.

“Freed books - The usage of public bookcases”
Monday 11:00 (SUITE 687).

Sarah Marth (Vienna University of Economics and Business) with Barbara Hartl, Eva Hofmann, Thomas Sabitzer, Elfriede Penz.

Abstract:
The concept of public bookcases fits perfectly to one of the basic ideas of the sharing economy, that is less possession and alternative kinds of consumerism and to the idea of the circular economy, that is to make products available for reusage when they are not needed anymore by an owner. Public bookcases are boxes or some other sort of publicly accessible bookcases that allow to place and exchange books. Thereby they provide a free and anonymous possibility to give away, share, and obtain access to books. Public bookcases were implemented widely in Europe and especially in
German speaking countries in the last years. For example, the website openbookcase.org lists a total number of 3128 public bookcases worldwide that have been reported by the users. In Vienna, approximately 60 public bookcases and other possibilities to share books at a public space can be found, which are mostly provided by associations, private initiatives or even the city administrations. Public bookcases provide the possibility to make use of unused resources which adds to the still growing societal and political discourse of sustainability and environmental protection as well as they foster social interactions by sometimes being used as places to meet and chat with neighbors and other people interested in reading. Despite these big amount and functions of bookcases, neither researchers nor providers looked more deeply into the content and dynamic of usage of public bookcases yet. As a consequence, few details are known about the bookcases and, so far, insufficient effort has been devoted to link public bookcases to the concepts and research results of the sharing economy. The current project’s aim is to investigate how public bookcases are used in Vienna by analysing the kind of books that are placed inside, the time that books remain in the bookcase until removal as well as differences between bookcases and possible reasons for these differences. Despite that, by observing public bookcases we also want to find out if public bookcases can be used for educational and marketing purposes.

For the following studies, three public bookcases in Vienna were chosen according to demographic data provided by Statistik Austria which thereby were expected to be highly heterogeneous concerning the users and the bookcases’ contents. For example, the location of these bookcases varies highly according to the socio-economic status of the district’s population, like education levels. In the first study, we observed the content and exchange rate of the three different bookcases. Each bookcase’s content was recorded for two weeks every two hours between 8 am and 8 pm, resulting in seven observations per bookcase per day, and a total of 98 observations per bookcase. By doing so, not only the favourite books of people were ascertained, but also differences between public bookcases that may be a result of its’ location. The results show significant differences between bookcases, especially one stands out as its’ amount of content and exchange rate is much lower than for the other two bookcases. In study 2 a researcher observed each public bookcase of interest at two different daytimes for 45 minutes. Thereby, the attention was paid on the amount of people passing by as well as the amount of people who head for the bookcase, the behaviour of people at the bookcase and duration of stay, the likelihood of bringing and taking books as well as other salient events, like social interactions. The observation was recorded in a protocol and used as additional information to the content’s observation of study 1. The first results show a constant exchange of the bookcases’ content which does not vary significantly throughout daytime. Also, it was observed that the bookcases constitute a place to linger as many people take time to look through books carefully before deciding to take one or more books with them. The same is true for people who place books in the bookcase. However, only a small number of interactions between persons was observed.

While well-known companies and offers in the sharing economy (e.g. Airbnb) are getting a lot of attention in research, the research on public bookcases is rare. The current study contributes to scientific literature by adding information about public bookcases to the ongoing discourse on activities in the sharing economy and shedding light on this slightly different concept compared to the typical examples of sharing economy offers, like Airbnb and car2go. Despite that, the results can also help providers of public bookcases and the city administration to use this knowledge in developing campaigns in order to distribute certain books or other information via the bookcases to
support people’s interests in reading and education and decide about educational initiatives by using the public bookcases as well as encourage social interactions. Additionally, the results of this investigation could be used for marketing purposes by publishing houses, book stores and even single authors to promote new books by distributing them with the help of public bookcases.

“Uncooperative sharing - Dealing with conflicts in community gardens”
Monday 11:00 (SUITE 687).

Thomas Sabitzer (WU - Vienna University of Economics and Business) with Barbara Hartl, Eva Hofmann, Sarah Marth, Elfriede Penz.

Abstract:
The sharing economy is a new promising trend where consumers are granting each other temporary access to underutilized physical assets (“idle capacity”). The access to these shared goods and services removes the necessity of ownership and comes with positive effects on society and environment. By reducing production rates and usage of resources, the sharing economy provides sustainable alternatives for traditional consumption. Besides the benefits of the sharing economy recent research shows, that sharing is often associated with problems. People may behave egoistically and benefit without contributing anything to the community they share goods with. As a result, this leads to conflicts and in the worst case to an end of the sharing activity. Especially sharing communities like community gardens which rely on self-regulation may suffer from uncooperative behaviour. To prevent conflicts and ensure cooperation in these communities it is important to investigate which forms of social regulation can be implemented in their agenda. The extended Slippery Slope Framework (SSF) which was developed in the research field of tax behaviour is used to address this research aim. The SSF proposes a positive relationship between regulation (harsh and soft forms) and trust (implicit and reason-based) on cooperation. In two studies it is investigated if the assumed relationships of the SSF can also be found besides the context of paying taxes and if the SSF is capable of explaining consumer behaviour in the field of the sharing economy by investigating sharing communities (study 1) and community gardens in particular (study 2).

In a first qualitative study, two focus group discussions with 13 consumers and non-consumers of the sharing economy were conducted. The participants talked about their experience with sharing activities, their reasons to engage or not, and their perceived role of trust and regulation in sharing communities. A template analysis of the focus group discussions points out, that social regulation is perceived as important to prevent exploitation of other community members. Additionally, the participants of the focus group discussions reported that social regulation should not include strict controls and punishment (harsh regulation), as this could lead to distrust between members of the sharing activity. Rather, the community should build on soft forms of regulation and offer a setting where problems are discussed democratically, and rules are set up together to ensure cooperation and generate trust.

The second study, a survey with 94 members of community gardens supports these results. The gardeners had to answer questions on used regulation, trust, conflicts, conflict resolution, and sense of community on Likert scales ranging from 1 (totally disagree) to 7 (totally agree). Furthermore, they reported ongoing conflicts in their community garden in an open question. Regression analysis reveals that harsh forms of regulation are related to a higher potential for conflicts, while trust is
related to less conflict potential. Additional analysis points out that soft forms of regulation are associated with less conflicts, better conflict resolution, a higher sense of community and more trust in the community. Furthermore, a correspondence analysis of the reported conflicts in the open question strengthens these results. 11 different conflict types and resolutions as well as three different combinations of social regulation were included in the correspondence analysis. The results show that high harsh combined with low soft forms of regulation are associated with relationship conflicts (intruding/bad mouth) and task conflicts regarding rules as well as an authoritarian type of resolution. In contrast high soft combined with low harsh forms of regulation are associated with the category “no conflicts” and task conflicts regarding acquisition of equipment and structural alterations in the garden. The corresponding type of conflict resolution is of democratic nature, such as voting.

This paper fills a research gap by investigating if social regulation mechanism based on the SSF can explain consumer behaviour in the context of sharing communities and gives advice how different forms of social regulation can be used to reduce conflicts, ensure cooperation and induce trust within these communities. For the existence and management of a sharing activity, these insights can be of great interest. The analysis of the two conducted studies highlights the importance of social regulation for the functioning of sharing communities. We recommend using soft forms of regulation and provide community members with support and information, instead of trying to prevent conflicts and achieve cooperation through controls and punishment. Democratic conflict resolution and an integration of all group members in the development of rules is expected to be beneficial. Altogether, this will help to maintain the sharing activity and as a consequence will help to foster sustainable development.
PARALLEL SESSION 2 (MONDAY 13:30)

Law and crime (HOGAN 1)

“Endogenous peer group effects on adolescents’ crime reporting intentions”

Monday 13:30 (HOGAN 1).

Mark Agee (Pennsylvania State University) with Thomas D. Crocker.

Abstract:

Student crime and misconduct, including but not limited to acts of violence, bullying, theft and academic dishonesty, is a common problem faced by children and adolescents in or around schools throughout the world. When misconduct occurs, most students are not only aware of it, but are also present and bear witness to it. However, while most students genuinely sympathize with the victims as well as disapprove of offenders, many of them are often reluctant to intervene or to inform adults. The behaviour of bystanders has been shown to play an important initial role in bringing down the effects of school misconduct. First, their social support can attenuate the harm caused to the victim. Second, schools where bystanders defend rather than stand by passively are demonstrably safer and educationally supportive. These findings have spurred health professionals to increase positive bystander behaviour (e.g., assertive defending, reporting, comforting, or not reinforcing offenders) as a way to decrease the occurrence and harm of student misconduct. The purpose of this paper is to assess the role that peer groups have in increasing positive bystander behaviour in or around school. Using a dataset of 1,686 middle school students from the Teens, Crime, and the Community Training Program (National Archive of Criminal Justice Data, 2005), we apply a two-step method to separately identify and estimate endogenous and exogenous peer group effects on students’ likelihood of reporting misconduct they might observe in or around their school. In the first step we estimate adolescents’ choice to report misconduct using a binary probit model with group fixed effects at the classroom level. Types of misconduct we examine include acts of physical violence or bullying, theft or burglary, or academic dishonesty. Because the exogenous individual and group variables belong to the information set of each individual, in a second step, we use an instrumental variable approach to consistently estimate exogenous and endogenous peer group effects via the estimates of group fixed effects. Results from our baseline model indicate that endogenous group effects are stronger for middle school students’ incentives to report misconduct witnessed at school (bullying, theft, academic dishonesty), and are somewhat weaker for misconduct witnessed away from school (burglary/theft, violence in the community). Results also indicate that endogenous group effects on general reporting intentions is larger for sample males than for sample females, particularly so for Hispanic males. Empirical evidence of the existence of endogenous group effects is important, as these effects can generate social multipliers—that is, an increase in the level of crime reporting among peers in a particular classroom leads to an increase in individual-level reporting intentions. Estimated social multipliers are approximately 2.6 for general misconduct reporting at school and 1.77 for general misconduct reporting away from school. This implies, for example, that if a school anti-crime program successfully raises students’ crime reporting intentions by 1 percentage point in the absence of endogenous group effects, then the same program will raise reporting intentions by 2.6 percentage points in the presence of these effects. Traditionally, adolescents have been studied as the objects, not the administrators, of social control.
As a result, too little is known about the factors influencing adolescents’ crime reporting intentions. Yet youths comprise a nontrivial share of school and community offenders and victims, making the study of adolescents’ reporting intentions particularly relevant. Understanding the processes through which student peer groups influence active reporting can offer insights into the design of interventions that enhance school and community safety by effecting positive change at the peer group level.

“Police bias in stop and search, but not as we know it”

Monday 13:30 (HOGAN 1).

Lara Vomfell (Warwick Business School) with Neil Stewart.

Abstract:

Black and Asian people in England and Wales make up only 10% of the population, yet they make up 30% of all stops and searches. Because of the over-representation of ethnic minorities, police forces face the accusation that their use of stop and search is discriminatory. Police forces reject this allegation by claiming that stop and search is not related to behaviours in the general population and therefore, it need not match population proportions. They argue that instead, stop and search targets crime because it is a tactic that helps them investigate and prevent crime. Thus, stop and search should be compared to baselines of known criminals: “if 99 per cent of people committing robberies are black [...] then you would expect to find 99 per cent of the stops/searches to be of black people”.

The over-representation of ethnic minorities in stop and search is a well-documented phenomenon. Its cause is less clear. There are two broad explanations why, while not legally permissible, ethnicity may be a relevant factor in search decisions. Both predict the same outcome—the over-representation of some ethnicities—so it is empirically difficult to distinguish them. The first explanation is ethnic prejudice, implicit or otherwise, under which police officers hold unfounded beliefs or stereotypes about some ethnicities. Under the second explanation ethnicity is an observable, informative characteristic and taking it into account improves the likelihood of a positive search outcome. For example, if some ethnic minorities have higher rates of criminal involvement, then searching these groups could result in more gathered intelligence or help close more investigations.

We develop a new approach to test whether officers follow the informative ethnicity approach by directly modelling stop and search decisions as a function of crime suspects’ ethnicities. We additionally employ spatially exact estimates of the local population in the officer’s patrolling area and officer characteristics. Added together, we use this model to investigate the over-representation of ethnic minorities as shaped by informative observables, officer bias and local neighbourhood circumstances.

Our analysis focuses on 38,241 search decisions made by 2,161 police officers from the West Midlands Police which serves 2.8 million people. For each officer, we estimate the share of each ethnicity in stop and search and in crimes, both at the level of the officer’s own experience and at the level of their team’s experience. We then present the following three core results.
First, we investigate claims put forth by police forces that officers’ searches of ethnicities are proportional to crime involvement. We show that the stop and search of Asian, Black and White people is not only not proportional to their prevalence in the criminal population. Additionally, prevalence is at best only very weakly related to ethnicity shares in the officers’ searches.

Our second analysis focuses on the substantial variation across officers in search behaviour. In contrast to the theory of informative observables, ethnicity shares in crime suspects are not associated with search shares. Instead, spatially exact information of the ethnic make-up of the areas visited by officers are strong predictors of search shares. This is consistent with officers initiating searches in the context of the local neighbourhood, rather than crime. However, officers’ searches are not sufficiently sensitive to the population make-up, with substantial variation in search shares not accounted for by the local population.

For our third analysis, we focus on officer characteristics and their explanatory power on search shares. Officer gender, ethnicity and age do not explain search behaviour. We exploit the transfers of officers between teams to explore the presence of consistent, stable officer bias as officers move teams. We find no substantial evidence to suggest that stable characteristics of the officer, such as attitudes toward ethnicity (implicit or otherwise) explain the variation in search behaviour. We conclude that the considerable over-representation of Black and Asian people in stop and search cannot be explained by officer bias.

Our results provide strong evidence that common theories on the source of ethnic over-representation in stop and search cannot explain officers’ search behaviour. We do not find any evidence that officers use beliefs about the criminal involvement of different ethnicities to inform their search decisions. Equally, officer biases do not account for the over-representation of ethnic minorities. Taken together, our work suggests that over-representation is the result of processes we do not yet know of or understand.

“Information search, coherence shifts and their interplay in legal decision making”
Monday 13:30 (HOGAN 1).

Peter Lewisch (University of Vienna) with Andreas Glöckner, Dorothee Mischkowski.

Abstract:
Making legal judgments requires making sense of a complex set of usually contradicting pieces of information. Systematic judgment biases can be caused - amongst others - by unbalanced information search (confirmatory search) as well as by biased information processing and particularly coherence structuring (coherence shifts) in which the interpretation of information is changed to fit the emerging favoured option. In four studies, we investigate the complex interplay between both kinds of influences. In a newly developed paradigm, participants completed three legal cases in which they could freely search for information. We manipulated between subjects whether systematic search was possible or not and measured the assessment of each investigated piece of information; moreover, we tracked the overall assessment of the case over time. In line with previous studies, we observe strong coherence shifts in each study. Contrary to our expectation, however, we mainly find disconformity information search, in that people tended to search for information that was contrary to their current belief in the given case. We also observed a
trend towards an interaction between both factors. Our results underline an unconscious striving for coherence when making complex judgments that cannot be easily corrected for.

“Do people prefer inefficient rules over discretion?”
*Monday 13:30 (HOGAN 1).*

*Rostislav Staněk (Masaryk University) with Katarína Čellárová, Ondřej Krčál.*

Abstract:
When lawmakers create laws, they must decide not only on the substance but also the form of the law. The choice of the legal form may be described as a choice between rules and discretion. Although the discretion may be more efficient, recent studies suggest that individuals value institutions and procedures for their intrinsic value, i.e. beyond the expected utility associated with the achieved outcome. The aim of our experiment is to identify discretion aversion. Our design combines an effort provision experiment and a voting experiment. Despite the fact that discretion regime is more efficient than the strict rule regime in our experiment, subjects vote significantly more often for the strict rule regime. In order to distinguish whether the unpopularity of the discretionary regime is driven by the presence of the human factor, we ran additional treatment where the human officer is replaced by the computer. The discretionary regime remains unpopular even in the treatment with the computer officer.

Finance 2 (HOGAN 2)

“How does responsibility sharing affect investment decisions?”
*Monday 13:30 (HOGAN 2).*

*Kremena Bachmann (Zurich University of Applied Sciences).*

Abstract:
Beliefs updating in the face of new information is essential for decisions under uncertainty. Although there are clear rational benchmarks how new information should be used, experiments show that individuals deviate from this benchmark by developing self-serving beliefs. For example, when judging their own abilities, individuals tend to ignore signal strength (Eil and Rao 2011) and overweight (underweight) positive (negative) feedback (Moebius et al. 2014); they also form beliefs in order to support undertaken efforts (Arrowood & Ross, 1966; Knox & Inkster, 1968; Yaryan & Festinger, 1961), or previous decisions (Arrowood and Ross 1966; Knox and Inkster 1968; Kuhnen et al. 2017; Kuhnen and Knutson 2011; Yaryan and Festinger 1961), which can also be observed in the forecasting behaviour of professional analysts (Eames et al. 2002).

The tendency to develop beliefs supporting past actions is an example of the psychological phenomenon termed by (Festinger 1957) as cognitive dissonance. According to Festinger’s theory, individuals distressed by conflicting cognitive elements, such as a discrepancy between empirical evidence and past choice, alter their beliefs to reduce this discomfort. From a theoretical perspective, if forward-looking agents generate beliefs strategically to eliminate the cognitive
dissonance, they may systematically deviate from optimal decision-making (Akerlof and Dickens 1982).

One way to limit the emotional discomfort that new information can trigger is to remove decisions (Kuhnen 2015). This paper considers another possibility to limit the emotional discomfort, that is to share the responsibility for previous decisions. Responsibility sharing is expected to reduce the cognitive dissonance, since cognitive dissonance can be experienced only to the extent that one feels responsible for the decisions (Cooper 1971). This study analyses experimentally whether sharing the responsibility for previous decisions can reduce the aspiration to update beliefs in a self-serving manner, that is, to develop beliefs that make previous decisions appear correct. Additionally, the study analyses whether the difference in beliefs updating induced by the responsibility sharing can explain differences in the subsequent risk-taking behaviour, in particular in the face of investment losses.

The investment behaviour of individuals after gains and losses has been subject of extensive research. In particular, empirical studies suggest that individual investors find it more difficult to sell losers than winners (Grinblatt and Keloharju 2001; Shefrin and Statman 1985) – an observation known as the “disposition effect”. So far, most theoretical explanations for the disposition effect are based on preference-based approaches such as the value function in the prospect theory (Kahneman and Tversky 1979), mental accounting (Thaler 1980) or realization theory (Barberis and Xiong 2012). However, Summers and Duxbury (2012) find that preferences alone are not sufficient to explain the disposition effect. The authors show that removing the responsibility for the initial decisions can eliminate the emotions of regret and elation following losses respectively gains and this can eliminate the disposition effect. Additionally, Staw (1976) suggests that the personal responsibility for the initial decision induces self-justification concerns that cause an escalation of commitment to a previously chosen losing course of action. Indeed, empirical studies show that investors are more willing to sell losers if they were not responsible for the initial decisions (Lehenkari 2012), if they have someone (e.g. a mutual fund manager) that they can blame for the losses (Chang et al. 2016), if the previous decision was made by someone else (Scherbina and Jin 2005) or if the selling decision can be delegated (Fischbacher et al. 2014; Richards et al. 2017).

This study tests the hypothesis that a responsibility transfer does not only affect the perceived utility loss from realizing losses; it may also affect investment decisions through the way decision-makers learn from new information. While cognitive dissonance can be experienced only to the extent that one feels responsible for the discrepant behaviour and the consequences (Cooper 1971), acting through an agent reduces the perceived responsibility of principles (Hamman et al. 2010) and the self-blame for having made a poor choice (Connolly and Zeelenberg 2002). This evidence motivates the hypothesis that decision-makers using an investment manager are less motivated to bias their beliefs in order to eliminate the cognitive dissonance associated with their previous decisions. Furthermore, this study aims to tests whether this difference in learning from new information can explain the empirical observation that investors are more willing to realise losses associated with actively managed funds than losses with direct investments (Chang et al. 2016). The existence of this beliefs channel in explaining subsequent selling decisions is tested with 660 Internet users in Germany recruited by a market research agency. The subjects participated in an investment game with two different tasks. In the probability estimation task, participants have been asked to estimate the probability that the payoff of a risky asset that they can observe is drawn from one of two
possible distributions. Afterwards, the individuals have been asked to complete an investment task. One group of participants was asked to decide how many shares of the risky asset they would like to obtain while obtaining no shares of the risky asset and holding cash was an alternative as well. Another group of participants were told that a virtual investment manager would decide randomly how many shares of the risky asset to hold and the participants could decide to invest with the manager or hold cash instead after observing the choice of the manager. Importantly, participants in both groups had the same information about the number of risky asset they hold, the payoff of the risky asset and performed the same beliefs updating task. However, in one group participants made investment decisions on their own, i.e. they decided about the variance of their payoffs, and in the other group the variance of the payoffs was decided randomly by a virtual manager so they were only responsible for the decision to take the risk or not and hold cash instead.

The results suggest that investors react to the same information differently in dependence of the outcome of their prior choices and the degree of responsibility for these outcomes. In particular, investors who share the responsibility for the investment outcomes are more willing to revise their beliefs than investors who decided autonomously. These differences in learning from new information can explain differences in the future risk taking behaviour. After losses, responsibility sharing reduces the motivation to develop optimistic beliefs, which helps to realize losses and improve the overall investment performance.

The effect of responsibility sharing on the beliefs formation can explain puzzling rebalancing behaviour of households across asset classes. Using administrative data from about 4.8 million Swedish households (Calvet et al. 2009) find that households use different rebalancing strategies across stocks and funds. In particular, the authors find that losses have a larger impact on the probability to sale mutual funds than stock investments. Similarly, Chang et al. (2016) observe that mutual fund investors find it easier to sell losers than investors holding stocks. The variation in the rebalancing behaviour across asset classes exists even among investors holding multiple asset classes. To explain these patterns in investment behaviour, Chang et al. (2016) use utility-based considerations, which consider only the standard instrumental value of beliefs. They consider the possibility that beliefs might affect the investment behaviour, but their experimental design does not allow analysing how such beliefs affect the decision behaviour of mutual fund investors and stock holders. Additionally, they cannot avoid the possibility that investors learn about the manager’s skills, which influences their investment decisions.

This paper brings forward a novel mechanism through which perceived responsibility for the previous decisions can affect risk taking. The results show that sharing the investment decision responsibility with a manager reduces the motivation to discount information that does not match with previous choice and this helps to realize losses, which improves the overall performance. The results are unlikely to be driven by learning about manager’s skills since investors know that the manager makes decisions by rolling a fair dice. The results of this paper have implications for the personal investment decisions and financial advisors. The individual investment performance can be moderated by measures that influence the individual involvement in the investment process. Investing with a mutual fund manager could be beneficial for the investment performance of the individual investors even if the mutual fund manager does not have any skills and this is a common knowledge as in this experimental setting.
“Effects of overconfidence on asset holdings among older adults”

Monday 13:30 (HOGAN 2).

Su Shin (University of Alabama) with Andrew S. Hanks.

Abstract:
Research in psychology shows that people mis-calibrate their ability and often incorrectly perceive themselves as having above (overconfident) or below average ability. Previous measures that proxy for overconfidence focus on perceptions about knowledge pertaining to economic conditions and financial markets since the researchers usually study economic and financial decisions. Our objective is to contribute to this literature by considering a more general proxy of overconfidence. We do so by operationalizing measures of subjective and objective cognitive ability in the Health and Retirement Study to estimate a proxy for overconfidence. This proxy is the residual variation of subjective cognition unexplained by an objective cognitive score and other covariates. We find that higher overconfidence leads to a lower chance of an individual having financial assets in nearly all accounts, such as cash-equivalent assets, stocks, CDs, and savings in various retirement accounts including defined benefits, defined contribution, and individual retirement accounts. Moreover, conditional on ownership, higher confidence leads to a decrease in financial holdings in cash-equivalent assets and thus in total financial assets. Conditional on ownership, more overconfidence leads to an increase in the share of wealth held in less actively managed accounts, such as cash-equivalent assets, CDs, DB, and other financial assets.

“Women’s portfolio choices: The relative importance of financial literacy and risk aversion”

Monday 13:30 (HOGAN 2).

Ellen K.Nyhus (University of Agder).

Abstract:
The purpose of this study is to explore the relative importance of financial literacy and risk aversion for females’ portfolio choices. More specifically, the effects of general financial literacy, self-assessed financial knowledge, specific knowledge about the stock market, and risk preferences on women’s investments in stocks and mutual funds are investigated. In most countries, a gender gap in investment behaviour is found, where men tend to invest more in risky assets than women do. This gap may in turn lead to a gender gap in wealth accumulation, rendering women financially worse off than men in old age. Previous research has suggested that the investment gender gap may be explained by gender differences in risk aversion (Croson & Gneezy, 2009). Recently, a few studies have also found that women’s lower tendency to invest in risky financial products may be linked to a lower financial literacy (Almenberg & Dreber, 2015; Bannier & Neubert, 2016; Van Rooij, Lusardi & Alessie, 2011). In this study, these relationships will be tested further, and the relative importance of risk aversion and financial literacy will be investigated. Both self-assessed financial literacy, general financial literacy and specific knowledge about financial investments/the stock market are assessed, in addition to attitudes towards financial risk. The study is conducted in a country with a high score on the World Economic Forum’s Equality index, making it less likely that gender role asymmetry and social norms can explain the differences in investment behavior (Barasinska & Schäfer, 2018). For the purpose of this study, two datasets representative of the Norwegian population are exploited. Both data collections were based on web-based surveys. One dataset (n=1031) consists of data
collected as part of OECD’s international mapping in 2015 (OECD, 2016). It contains responses to an 8-item index of financial literacy, more specific questions about knowledge about the stock market as well as questions about various types of financial behavior. The second data set (n=2209) consists of data collected in 2018 and contains responses to a 50-item financial literacy scale, covering ten different financial topics (Nicolini, 2019). Both data sets include socio-economic variables such as income, age, labour market status, living situation, educational attainment, etc, which will be used as control variables. In addition, both data sets include a question about risk preferences. Preliminary analyses show that Norwegian women have much lower financial literacy than Norwegian men, which is surprising given the high degree of gender equality in Norway. We find the same gender gaps that have been documented in other countries: women perceive their own financial knowledge to be lower than men do, they express a higher risk aversion than men, and they invest less in stocks and mutual funds than men. In the next step, multivariate analyses will be carried out to test which variables that are the most important in predicting women’s investments in stocks and mutual funds. This will be done by estimating linear probability regression models on the ownership of stocks or mutual funds, with the financial literacy measures and the risk aversion variable as explanatory variables. Implications of the findings will be discussed.

“Measuring individual investors overconfidence”
Monday 13:30 (HOGAN 2).

Oscar Stålnacke (Umea School of Business and Economics).

Abstract:
This paper studies individual investors’ overconfidence by combining survey and registry data of a random sample of individual investors in Sweden. I provide a new overconfidence measure based on comparing investors beliefs of their ability to earn high stock portfolio returns with their actual ability. I show that this measure is better at accounting for gender differences in overconfidence than the better than average effect and provide evidence that investors’ overconfidence increases if they are male, more experienced, and financial professionals and that it decreases if they are unemployed and natives.
Health 2 (NALLY)

“Personalised health information and willingness to participate in weight loss programs: Evidence from a randomised experiment”

Monday 13:30 (NALLY).

Jonathan Spiteri (University of Malta) with Marie Briguglio, Kurt De Giorgio.

Abstract:
The prevalence of obesity is a rapidly growing global public health concern (Seidell, 1995a; World Health Organization, 2000). Obesity levels have increased by 8% in the Organisation for Economic Cooperation and Development (OECD) countries over the last two decades. In previous centuries an increase in body fat could have signalled improved health but current research clearly shows that being overweight is not only dangerous to one’s health but also brings along significant psychological, social and economic consequences.

Obesity could be interpreted as “a sign of commercial success but a market failure” (Moodie et al, 2006). Government intervention is justified in the presence of market failures; failure to link diet and disease therefore taking consumption decisions with imperfect information, individuals not bearing the full costs of unhealthy habits, and time inconsistencies, that is, short term preferences outweighing long term wellbeing. And yet, despite the clear need and rationale for such interventions, although various initiatives have been undertaken to address obesity among children (e.g. Stone et al., 1996; Williams et al., 2002), the rising incidence of obesity across all age groups suggests that interventions so far have had limited in terms of their pervasive success. In particular, the use of information campaigns in order to encourage healthier lifestyles and eating habits have come under increased scrutiny due to their mixed results. On the one hand, Carrera et al (2015) find that providing personalised health information regarding cholesterol levels has a significant impact in terms of encouraging healthier food choices within a workplace setting. On the other hand, Belot et al (2019) find limited evidence that the provision of tailored information regarding heart disease and diabetes leads to healthier food choices from an online supermarket setting.

This paper looks at the impact of personalised health information on subjects’ willingness to participate in a voluntary, incentivised weight loss scheme. An online survey was designed and administered to a random sample of over 600 overweight or obese individuals, who were randomly assigned to one of two groups. The first group received generic information regarding different body-mass-index (BMI) values and the potential health issues associated with being overweight or obese, while the second group were specifically informed of their own BMI, together with the generic information provided in the first group. Participants were then asked to indicate their willingness to take part in a hypothetical, incentivised scheme whereby overweight or obese participants would be paid money by the government in order to lose weight up to a healthy, predetermined point. The results showed that the provision of personalised BMI information had no statistically-significant impact on people’s willingness to participate in this scheme, with further analysis suggesting that respondents were already aware of the health issues associated with being overweight or obese, as well as their own status. Rather, the key determinants underpinning participation are income, age and gender. More specifically, people with lower income levels, younger respondents and females are more likely to participate in such a scheme. The results have
important implications since they suggest that the effectiveness of public health information campaigns targeted at obesity need to be revisited, and that incentivised schemes may lead to significant health benefits in terms of weight loss, particularly among lower-income groups. This is important given the fact that such groups have traditionally been associated both with higher obesity rates (Levine, 2011) as well as poorer health outcomes (Marmot, 2005), leading to a widespread problem with regards to rising health inequalities across the world.

“Crowdfunding for health research projects: An online experiment”
Monday 13:30 (NALLY).

Francesco Salustri (University of Oxford) with Joel Smith.

Abstract:
The high costs of clinical trials and drug development inhibit access and speed of translation of new pharmaceutical innovations. Patents are commonly used as a means to incentivise future drug development further increasing the costs of new marketed drugs by restricting access to research and development. The cost associated with drug development from bench to bedside have increased dramatically over recent years further limiting the pool of candidate drugs in the development process. In particular, the economic burden of new drug development requires pharmaceutical firms to prioritise based on the probability of a successful outcome ensuring sufficient returns on investment. Among the possible solutions to overcome these limitations, we explore the demand side of a market for clinical research by evaluating the potential benefit of crowdfunding. Specifically, a crowdfunding platform where certified researchers can ask the general public to fund their biomedical research projects may facilitate more timely testing and development of new drugs. In addition, such crowdfunding system would reflect public preferences that may compensate any possible bias arising from pharmaceutical industry preferences.

Our study mimics a civic crowdfunding platform which aims to raise funds for early phase drug development projects. In doing so, we aim to answer the following research questions:

1) Does a crowdfunding mechanism help under-researched clinical projects in raising more funds?
2) Which tools can be implemented to redistribute funding allocation and prevent the least preferred projects from entering clinical trials?

While the experimental literature acknowledges the similarity between crowdfunding platforms and threshold public good games, we add a health component to the options which reveal health preferences for crowds. Due to the inclusion of our health component, the classic problem of coordination on the most efficient option in threshold public goods becomes the distribution across least preferred options in our biomedical crowdfunding.

We conduct a two-arm online experiment in which participants are endowed with an amount of money to be distributed among a private account or different biomedical projects with a positive externality. In the first arm, biomedical projects only differ in the diseases they aim to cure, which range from common conditions to rare diseases. This control setting allows us to elicit subjects’ health preferences. As for the treatment phase, we then implement three different behavioural tools to understand if and how neutral information nudges can help least preferred projects to reach
the funding threshold. In particular, we test the effect of three kinds of information, namely the probability of each project to reach the threshold, the probability of each project to be successful in further developing a new drugs, and, lastly, a statistical fact on the least preferred disease. Each treatment works on different decision components including information, expected utility, and collective choices. In the second arm, we replicate the first arm with each biomedical project displaying different threshold and externality values. A between-arm comparison roughly suggests the subjects’ willingness to pay for their preferred diseases.

Our study is particularly informative for under-researched clinical areas for drug development, such as rare diseases, which may benefit from innovative funding systems as they may currently be penalised by both industry objectives and societal preferences. We also expect our findings to illustrate how behavioural tools on information and characteristics disclosure frame subjects’ preferences in a health-related context.

“Improving the validation of hospital waiting lists with nudging”

Monday 13:30 (NALLY).

Robert Murphy (Department of Health, Ireland) with Delaney, L., Lunn, P., Robertson, D., Ryan, H., Taaffe, C., Wood, A.

Abstract:

Background: It is good practice for hospitals to undertake administrative validation of waiting lists. This is a process where hospital administration contacts patients on waiting lists to check if patients still require a procedure or wish to be removed from a waiting list. The National Inpatient, Day Case, Planned Procedure (IDPP) Waiting List Management Protocol (NTPF) includes an administrative validation process for IDPP waiting lists and states that “it is compulsory that a formal bi-annual hospital validation is carried out on all inpatient and day case waiting lists over six months.” It is estimated that approximately 25% or one in every four patients do not reply to a validation letter.

The Project: Different validation letters are currently used throughout the health system. After looking at a sample of existing letters we wanted to explore if using behavioural insights would help more patients to engage with the validation process. This was measured by lower non-responses from patients. The Research Services Unit in the Department of Health worked collaboratively with the National Treatment Purchase Fund (NTPF) and the Health Service Executive (HSE) and an advisory group to design a behaviourally informed and tested letter.

Results: The number of patients who did not reply was lower for the redesigned validation letter (Letter B) than for the control letter (Letter A). Patients who received Letter B had statistically significantly lower non-responses of 19% compared to non-responses for patients who received Letter A of 24%, Z = 2.99, p < .01. See Figure 1. Letter B achieved a 19.3% better performance or resulted in one in five non-responders changing their behaviour. The results were also confirmed with multi-level modelling.

Conclusion: Using the redesigned validation letter reduced non-responses. We suspect this is because it makes clearer the importance of the validation process and what the patient is asked to do. Based on bi-annual validation of 2017 waiting lists of three months plus for inpatient and day cases, it would result in at least 5,000 more patients responding. It would reduce follow-up for non-
response, enable better use of resources and help hospitals to meet their requirement in the Protocol.

Application: The redesigned letter is now the national template and is used across the country.

“Informing members of the general population of the influence of dimensions of health on patients’ subjective wellbeing increases the priority placed on mental health”

Monday 13:30 (NALLY).

Robert Murphy (Department of Health, Ireland) with Christopher J. Boyce, Paul Dolan and Alex M. Wood.

Abstract:

Background: As not all health treatments can be afforded good practice suggests that governments and health agencies should compute how treatments affect the total number of quality adjusted life years (QALYs), a measure of a person’s length of life weighted by a judgment of their health-related quality of life (HRQoL), that the patient would experience and only fund treatments for which the cost per additional QALY is below a threshold (Drummond, Sculpher, Torrance, O’Brien, & Stoddart, 2005). The second component of QALYs, the quality element, is based in most countries on health valuation studies in which representative surveys of the general population are provided with a functional description of different health scenarios and asked their preferences, the results are referred to as general population valuations. While this is the mainstream approach, a number of leading researchers have argued that asking people from the general population to imagine what it is like to live in hypothetical health scenarios is not the best way to compute the quality component of QALYs. Instead, they argue the quality component (or QALY weights) should be derived from statistical analysis of the actual association of different dimensions of health on patients’ subjective wellbeing (SWB) (Dolan, Lee, & Peasgood, 2012).

Adopting a SWB approach would change the priority given to different dimensions/domains of health, as empirical evidence shows “domain weights . . . differ across preferences and SWB” (Dolan & Metcalfe 2012). This is most notable in the case of mental health. In contrast to the mainstream approach, the SWB approach places the greatest weight on addressing problems, both moderate and severe, of anxiety/depression over problems in other dimensions of health. Despite this, one factor in particular is likely to limit the widespread application of a SWB approach in publicly funded healthcare; the SWB approach does not take into account the views of the public. But what then should be done about the discord between weights for the quality components of QALYs assigned by the mainstream general population valuations approach versus the SWB approach?

Objective: The difference between the priority assigned to addressing anxiety/depression by preferences for hypothetical health states and the actual association with SWB suggests that when providing preferences for hypothetical health states people from the general population underestimate the severity or impact of anxiety/depression on SWB. This might be due to a less negative primary and secondary appraisal (Lazarus and Folkman) of anxiety/depression than other health states because people are less aware of the impact of anxiety/depression on SWB, perhaps due to its lower prevalence than other dimensions of health, or because cognitive biases that can occur when people from the general population appraise hypothetical health states (such as loss-
framing, failure to anticipate adaptation and focusing illusion) maybe more prevalence when appraising health states other than anxiety. We introduce a simple change to improve the validity of QALYs by ensuring participants have more complete information on the health states they judge. This study is the first to examine the impact of experience informed general population valuations for generic health states as opposed to specific health conditions, and the first to examine how being informed influences participants prioritization of different dimensions of health.

Methods: We predict that provision of information on the association of health states with SWB to participants before they appraise health states will result in a lower preference for (higher priority being assigned to treatments for) anxiety/depression. This is tested through a randomized control trial in which general population participants (N=1502) choose between three health states using a discrete choice experiment (1st, 2nd or 3rd preference to live in). Three parallel groups judge the same three health states; the control group adheres to the mainstream process, while for the treatment groups a simple change is made to the mainstream process by providing information on the association of the health states with differences in SWB before they judge the health states. Since SWB can be measured by global evaluations of life satisfaction or by experiences of daily affect this study provides information on two measures of SWB; the evaluative measure of “life satisfaction” (experimental treatment 1) and the experience measure of “day affect” (experimental treatment 2). Participants judge the three moderate health states of moderate pain/discomfort, some problems with self-care and moderate anxiety/depression. We focus on “some problems”, the second level of a dimension, as these are much more commonly observed in the population than extreme problems.

Results: First, selection of a health state as the least preferred health state is equivalent to assigning it the highest weight or judging it to be the priority for health treatments. The proportion of participants who selected moderate anxiety/depression as the least preferred health state was higher in the treatment groups, 0.48, than in the control group, 0.35 (see Figure 1). Information provision had a small effect size, h = 0.265. Second, estimates of the ordered logit choice for moderate anxiety/depression show a significant positive coefficient on INFO. That is a one unit increase in INFO (i.e., going from no prior SWB information to prior provision of SWB information) is associated with higher levels on the outcome variable. This applies for both LS information, z(837) = 4.15, p < .001, and for day affect information, z(787) = 4.39, p < .001. The ordered probit models produced consistent results. This suggests, as predicted, that provision of SWB information on health states results in a lower preference for moderate anxiety/depression, which under the QALY weights system means a higher priority for health treatments for people with moderate anxiety/depression. This suggests a shift in preferences, consistent with our hypothesis. The marginal effects coefficients shows the size of the effect and estimates of these indicate that the effect size is similar for provision of LS and DA information. Participants informed of the association of the three health states with life satisfaction were 13-14% more likely to choose moderate anxiety/depression as the least preferred health state and less likely to choose it as their second preference by 2-3% or most preferred health state by 10-11%. Overall, the results suggest that being informed of the association between health states and SWB results in moderate anxiety/depression being less preferred and so of increased priority to being addressed.

Conclusions: This simple change to existing methodology may provide a middle-ground in the debate around basing QALYs weights (a) purely on their association with SWB, or (b) continuing to
use the views of the general population. This study shows that using the approach of SWB informed general population valuations, which obtains the views of the general population consistent with the existing methodology, increases the priority placed on addressing mental health, thereby producing results consistent with the SWB approach.
Taxation (DAVIN)

“Delayed audit feedback: Effects on tax compliance, decision time, and information acquisition”
Monday 13:30 (DAVIN).

Christoph Kogler (Tilburg University) with Jenna Barrett, Anthony Evans, Jerome Olsen.

Abstract:
Previous studies (Kogler, Mittone, & Kirchler, 2016; Muehlbacher, Mittone, Kastlunger, & Kirchler, 2012) suggest that delaying feedback on tax audits leads to higher levels of tax compliance compared to immediate feedback (the standard form of feedback in lab studies on tax compliance). In experimental research on tax behaviour audits usually occur directly after filing taxes, and feedback on the consequences of an audit is given immediately. In reality, audits happen within a much longer period of time. This difference in time lags between filing and audit feedback may play a crucial role with regard to the external validity of experimental results. The two present studies investigate the stability of the effect of delayed audit feedback on tax compliance by varying tax rates, audit probabilities, and fine rates, as these factors are known to have a strong influence on tax compliance. Furthermore, specific attention is paid to how long participants take time to decide whether to comply or evade (Study 1) and the process of information acquisition before making a compliance decision (Study 2).

For Study 1, the following hypotheses were preregistered: (H1a) Delayed feedback should lead to higher relative tax compliance compared to immediate feedback and (H1b) this effect is assumed to become stronger over time. With regard to tax-related parameters, it is expected that (H2) lower tax rates, higher audit probabilities, and higher fine rates lead to higher relative tax compliance. (H3) Additionally, it is expected that deterrence parameters and feedback timing interact with each other. Relative tax compliance is expected to be highest when audit probability and fine rates are high(er) and feedback is delayed. In an exploratory analysis, reaction times for delayed and immediate feedback are compared.

In an incentivized experiment 205 participants (134 females; mean age = 21.08, SD = 2.42) were randomly assigned to either the delayed or immediate feedback condition. Randomization occurred on session-level. In the immediate feedback condition they received feedback on whether they were audited or not and if an audit resulted in a fine after each round. In the delayed feedback condition, they received feedback on audits and fines for all rounds simultaneously at the end of the experiment. Over the course of 18 rounds participants earned income based on an effort task and had to pay taxes on that income. Tax rates (10%/30%/50%), audit probabilities (5%/15%/25%), and fine levels (1.5 x evaded amount/2.5 x evaded amount) were varied within these 18 rounds. Reaction times were recorded and after the experiment participants filled in a questionnaire measuring fairness perceptions, subjective audit probability, and perceived severity of fines among others.

The results reveal that compliance in the delayed feedback condition was significantly higher than in the immediate feedback condition, and this effect developed over time. In addition, lower tax rates, higher audit probability, and higher fine levels resulted in higher tax compliance. Furthermore, a significant interaction of feedback type x audit probability was observed, with higher compliance in case of delayed feedback and the medium level of audit probability (i.e. 15%). Exploratory analysis
regarding reaction times clearly showed that participants in the delayed feedback condition were slower in deciding whether to comply or evade. In combination with perceiving delayed feedback as more unfair as indicated in the post-experimental questionnaire, the difference in reaction times is interpreted as potential evidence of aversive uncertainty.

Study 2, which is currently still ongoing, has a pre-registered target sample size of \( N = 200 \). The basic design is similar to the design of Study 1, with a between-subjects manipulation of feedback timing (delayed vs. immediate), and a within-subjects manipulation of tax rates (20%/40%), audit probabilities (10%/20%/30%), and fine levels (1 x evaded amount/2 x evaded amount/3 x evaded amount) varied within 18 rounds of earning income (effort task) and paying taxes. The information about the tax parameters in each round (earned income, tax rate, audit probability, and fine rate) is presented via the online tool MouselabWEB. Four boxes labelled income, tax rate, audit probability, and fine rate are presented. To access the underlying information the mouse cursor has to be moved over the respective box. Acquisition of information is measured by frequency and duration of opening presented MouselabWEB boxes. Besides the effect of delayed feedback on relative tax compliance and decision times this study also allows us to investigate differences with regard to information acquisition. The pre-registered assumption is that immediate audit feedback leads to less acquisition of information on audit probability and fine rate compared to delayed feedback. Implications for tax research as well as policy-making will be discussed, with special attention to the relation of delayed audit feedback to perceived procedural fairness and trust in authorities, as post-experimental questionnaires in both studies include items on these issues.

“The common good provision scale (CGP): An application in the field of tax compliance and charitable giving”

*Monday 13:30 (DAVIN).*

**Cinzia Castiglioni (Università Cattolica del Sacro Cuore) with Edoardo Lozza.**

Abstract:

1. Introduction

The most recent financial crisis has brought insecurity, economic instability, and ongoing turbulence in many governments and their countries. One of the main concerns is the financial provision for the common good, as the lack of resources available to be reallocated and redistributed among citizens could hamper the sustainable development of society as a whole. That is why many believe that – especially in the aftermath of the most recent global financial crisis – personal greed should take a back seat and individual needs should be aligned with the needs of the society and more generally the common good. This, for example, includes the reallocation of monetary resources to financially provide for the common good through paying taxes and making charitable donations.

On this basis, this study will present the development and validation of a metric aimed at assessing different motives for providing for the common good (i.e., the Common Good Provision scale, or CGP). By adopting a psychological perspective, it aims to gain an understanding of the motives behind the private contributions to the common good, which appears to be a basic prerequisite for economic and social sustainability.
2. Procedure and participants
First, a qualitative study has been conducted by adopting the Interpretative Phenomenological. Fifteen in-depth and unstructured interviews (approximately 50-60 minutes each) were conducted on Italian taxpayers. The aim was to investigate lay people’s representation of ‘the common good’ and its financial provision (Castiglioni, Lozza, & Bosio, 2018).

Based on the insights from the qualitative study, we developed the initial items and developed a questionnaire for validating and assessing the psychometric properties of the scale. Given the lack of a well-developed measurement of people’s proclivity to provide for the common good, it was not possible to include in the questionnaire other similar measurements to demonstrate construct validity. Instead, the interconnections between the construct and other hypothetically related constructs have been examined, focusing on the so-called nomological network. Civic Engagement Scale (CES, Doolittle & Faul, 2013) and Collectivism (Hofsteade, 2001) measures were used. To measure participants’ proclivity to be tax compliant and making monetary donations, Tax Evasion dimension from the TAX-I inventory (Kirchler & Wahl, 2010) and an ad-hoc scale for assessing donation intentions were used. The questionnaire was administered to a sample of Italian participants and 469 valid questionnaires were collected (61.4% females, Mage = 35.5, SDage = 13.5).

“**We have good news!’ Media negativity bias and tax compliance**”
*Monday 13:30 (DAVIN).*

*Miloš Fišar (Masaryk University) with Tommaso Reggiani, Jiří Špalek.*

Abstract:
We study the effect of the Media Negativity Bias on tax compliance. The Media Negativity Bias is defined as the systematic tendency of media to focus on negative news. We design a framed laboratory experiment to analyse how the systematic exposure to real negative vs. positive news affect subjects’ compliance in a repeated taxation game. Resembling the real-world setting, experimental manipulations are based on news tickers running on subjects’ screens during a taxation game. News tickers report about real media news focusing on public policy/finance issues. Employing a between-subjects design, we contrast tax compliance outcomes under three different conditions: neutral, positive and negative news bias. We found that systematic provision of positive news significantly increases tax compliance. This result calls for a more balanced and pluralistic information provision. The dissemination of positive news sustains tax morale.

“**Impact of emotions on tax compliance decisions: A laboratory experiment**”
*Monday 13:30 (DAVIN).*

*Erich Kirchler (University of Vienna) with Janina Enachescu, Jerome Olsen, Žiga Puklavec.*

Abstract:
Emotions are increasingly gaining attention in research on tax decisions. We distinguish between incidental and integral emotions, that is, emotions originating from circumstances unrelated to tax authorities, and emotions inherent to direct experiences with tax issues. While integral emotions
such as anticipated regret, shame, anger, fear, or feelings of security impact on compliance and non-compliance, it is unclear whether incidental emotions shape tax paying decisions.

We conducted a laboratory experiment in which we investigated the impact of incidental emotions. We manipulated happiness, fear, and anger in a between-subjects design by presenting video clips combined with background music. We instructed 264 participants to earn experimental money by performing an effort task and declaring their income to pay taxes. The experimental procedure comprised a total of 16 taxpaying rounds. The first two rounds were for getting acquainted with the game. Eight rounds were played before the induction of emotion (baseline treatment) and eight rounds after the emotion induction. Besides observing tax compliance, we assessed arousal by measuring electrodermal activity and decision times during the experiment. Results rise doubts that incidental emotions shape compliance behaviour. Also, decision times did not vary between experimental conditions and had no measurable impact on behaviour.

We conclude that incidental emotions have little influence on tax compliance, whereas integral emotions may have a strong impact. On one hand, research has shown that anticipated regret and shame are relevant. On the other hand, we speculate about the role of emotions in the context of the slippery slope framework.
Biases & decisions 2 (SUITE 679)

“Jumping to conclusions when sampling biases are neglected: Evidence & theory”
Monday 13:30 (SUITE 679).

Ágnes Pintér (Universidad Autonoma de Madrid) with Raúl López-Pérez; Rocío Sánchez-Mangas.

Abstract:
People often extrapolate from data samples, inferring properties of the population like the rate of some event, class, or group – e.g. the percent of female scientists, the crime rate, the chances to suffer some illness. In many circumstances, however, the sample observed is non-random, i.e., affected by sampling bias. For instance, news media rarely display (intentionally or not) a balanced view of the state of the world, focusing particularly on dramatic and rare events. Do people take into account sampling biases when forming their beliefs? Unless the bias is evident, we conjecture that the answer is negative: People update their beliefs as if sampling were random, thus reaching ‘extreme’ conclusions – e.g. a very pessimistic outlook about the prevalence of crime, war, or poverty, based on the news. To test this conjecture, we design three experimental treatments in which subjects must infer the distribution of a binary signal given a non-random sample. In line with our hypothesis, subjects over-estimate the rate of occurrence of the outcome most frequently observed in the sample, unless the sampling bias is transparent.

“Socioeconomic differences in economic forecasts: Parsing signal from noise using an experiment crossed with a natural experiment”
Monday 13:30 (SUITE 679).

David Comerford (University of Stirling).

Abstract:
Socioeconomic Differences in Economic Forecasts: Parsing Signal from Noise using an Experiment crossed with a Natural Experiment A person’s socioeconomic status (henceforth SES) predicts her macroeconomic expectations. This SES effect had been assumed to stem from SES differences in the information people encounter. A recent laboratory experiment explains part of the SES effect as stemming from pessimism on the part of the lowest SES participants. Distinguishing between the two mechanisms is important. For instance, diverse information improves aggregated forecasts whereas time-varying pessimism adds noise to aggregated forecasts. The current research presents a means to identify noise in expectations data. Each quarter for three years we randomly assigned 2,000 Scottish respondents to report economic trends either by a novel indirect format or by the standard direct question format that is used in for instance, the Michigan Survey of Consumers. The indirect format strips out redundancy to deliver a less noisy measure of trend than the direct format. In the middle of our data collection a referendum took place on Scottish Independence. We show that the explanations for the SES effect varied systematically pre- and post-referendum. A substantial portion of the pre-referendum SES effect looks to be explained by selective retrieval of information. Since the referendum, the SES effect is entirely explained by survey response bias. Our methods and results yield insights for forecasting and investor judgment and decision making.
Bayesian updating, learning and imitating: Evidence from laboratory experiments

Monday 13:30 (SUITE 679).

Doris Läpple (National University of Ireland Galway) with Bradford Barham, Annemie Maertens.

Abstract:
We use experiments to investigate how subjects update beliefs depending on knowledge about information signal quality. Subjects play a multiple cue probabilistic learning task in groups of three. After submitting initial beliefs, subjects are informed about their group members’ beliefs and can interact via online chats. They then have the opportunity to privately update their beliefs. We vary the amount of information subjects receive about the ability of their group. Our findings indicate that Bayesian updating is not an individual trait but can be influenced by external factors. More specifically, we show that subjects’ belief formation and updating processes vary with group heterogeneity and knowledge about subjects’ own and peers’ ability. Moreover, most subjects simply imitate their peers and do not improve their own updating algorithm.

Introduction
Social learning is ubiquitous. In many situations people ask or discuss decisions with their peers before making a final decision. Consider an editor asking for three reviewers’ opinions, a farmer asking peers about the use of a new technology, or a manager consulting other colleagues for strategic decisions. All this implies some belief updating process.

Most previous applications have focused on whether or not Bayesian updating is happening. In our article, we take a closer look at Bayesian updating and explore how subjects update their beliefs following advice from and communication with peers. Specifically, we explore whether subjects learn or simply imitate their peers, and also test the influence of external factors on Bayesian updating.

Experiment and Data
We have laboratory experimental data on 203 participants who first played a multiple cue probability learning task to learn about the underlying algorithm and then played a modified version of the same task that assessed belief updating based on peer advice and communication.

In our experiment, subjects viewed coloured circles over several rounds $t$ and had to estimate the correct value ($y_t$) associated with it. The game is framed around a cattle disease outbreak where subjects have to estimate how many cattle died based on the affected area $A_t$ (i.e. size of the circle) and severity of the disease $\beta_j t$ (i.e. colour). The outcome was determined as follows:

$$y_t = \alpha \beta_j t A_t$$

$$A_t = \pi r_t^2,$$

where $\alpha$ is a constant, $\beta_j$ with $j = 1, \ldots, J$ and $J = 4$ resembles four different disease severities, and $r$ is the radius.

Given the relative difficulty of the multiple cue probabilistic learning task, we first established the learning ability of each subject during the “learning ability” stage of the game, which was played for 20 rounds. Here, participants were presented with coloured circles, typed in their initial beliefs of the correct answer, and were then presented with the correct estimate.
Next, subjects played the “peer advice” stage of the game for 12 rounds. Here, subjects were paired in groups of three based on their learning ability (as measured in the previous stage of the experiment) with the aim to create heterogeneous groups. Again, subjects were presented with a coloured circle, had to submit their initial belief, and were then presented with the initial beliefs of their group members followed by online chats, and the opportunity to submit an updated belief. After eight rounds, half of the groups were presented with information about the (stage one) learning ability of all group members (“information treatment”). The game continued for four more rounds.

Methods
We measure performance as mean absolute error (MAE), calculated as

\[ MAE = \text{mean}(|a_{it} - y_t|), \]

where \( a_{it} \) is either the initial or updated belief of subject \( i \) in round \( t \) and \( y_t \) is the correct answer in round \( t \). The smaller MAE, the better the performance. We define learning as decreasing absolute errors of initial beliefs over time, while we refer to a decrease of MAE of updated beliefs as imitating.

We estimate the following econometric models to explore how information treatment and group heterogeneity impact on belief updating:

\[ y_{it} = \alpha + \beta_1 \text{best} + \beta_2 \text{info} + \beta_3 \text{best} \times \text{info} + \beta_4 \text{rounds} + \beta_5 X + \epsilon, \]

where \( y_{it} \) refers to updated beliefs, MAE of initial or updated beliefs, or belief updating of subject \( i \) in round \( t \). We calculate belief updating as \((\text{updated belief}_i - \text{initial belief}_i) / (\text{initial belief}_j - \text{initial belief}_i)\), where \( i \) refers to the own player’s belief and \( j \) to the other subjects in the group. \text{best} is a dummy indicating the best player in the group, \text{info} is a dummy for the information treatment, \text{rounds} controls for the effect over time, and \( X \) are other control variables. We estimate the regressions separately for high and low heterogeneity groups and also explore several belief updating strategies in more detail.

Results and Discussion
Our findings reveal that updated beliefs improved following peer advice and we explore this process in more detail. More specifically, our empirical results confirm a significant treatment effect in the sense that revealing information about group members’ ability impacts on belief updating. This effect is more pronounced in heterogeneous ability groups. Our findings also indicate that subjects vary in their belief updating strategy between rounds, and no subject continuously follows one belief updating strategy. That is, while overall decisions, almost half of them follow Bayesian updating, in almost a third of decisions no updating of beliefs occurs and in about 10 percent of decisions subjects either completely agree with the peer advice or initial beliefs coincide with peers’ beliefs. Overall, our analysis indicates that the ability to do Bayesian updating is not an individual trait, but it can be influenced by external factors.
Abstract:
We provide evidence that individuals generally behave consistently with Bayes Rule defined over continuous events in the sense that they report subjective belief distributions that are unbiased, but that they behave inconsistently in the sense that they exhibit significant overconfidence. The evidence presented here elicits beliefs with financial incentives, controls for the risk preferences of individuals when inferring latent beliefs, allows for relaxations of the Reduction of Compound Lotteries axiom, and tests Bayes Rule in a setting in which the posterior distribution is known for each individual and belief elicitation. In contrast to previous behavioural evaluations of the consistency of beliefs with respect to Bayes Rule, our tests of overconfidence are direct.
“The economic psychology of Brexit”
Monday 13:30 (SUITE 686).

Stephen Lea (University of Exeter).

Abstract:
The results of the 2016 referendum on whether the UK should withdraw from the European Union (the “Brexit referendum”) took many commentators by surprise, not least because much evidence suggests that EU membership has had positive economic impacts on the UK. Indeed, some of the strongest votes to leave the EU were recorded in parts of the UK that have received heavy inward funding from EU sources. The vote to leave the union therefore looks like an example of irrational economic behaviour, the classic theatre for the deployment of psychological explanations. Because the results of the referendum were made available by parliamentary constituencies, it has been possible to analyse voting patterns (voting to leave, voting to remain, or failing to vote) according to a variety of geographical, social, economic and to some extent psychological factors. In addition, since the referendum, a number of survey studies have asked people about their voting in the referendum and have sought to relate it to their individual or societal characteristics. The present paper will attempt to integrate the available literature, together with additional analyses, to produce a comprehensive economic psychological analysis of the referendum results. A tentative conclusion (subject to revision in the light of continuing analysis) is that the suggestion of irrationality is wide of the mark. Two other psychological factors seem to have been more important. First, the steady increase in economic inequality in the UK over the past decades, accentuated by the response to the recession that began in 2008, meant that the perceived (and perhaps the actual) gains from EU membership were concentrated in the hands of a minority of the national population. Second, the social identities of many British (especially English) people embed a concept of Britishness that does not include a European dimension, and this perspective is endorsed by a majority of the UK media.

The question of what role racism or xenophobia may have played in voting patterns will also be examined, since there is no doubt that attempts were made during the referendum campaigns to link EU membership to unwanted immigration to the UK, especially in the light of the Syrian refugee crisis of the time. This is important, moreover, for consideration of the “contact hypothesis” of intergroup relations. The tentative conclusion here (again subject to revision) is that the possibility of xenophobia has to be viewed in a nuanced way. Substantial “leave” majorities were recorded in some areas where there has almost no EU (or other) inward migration, but also in some areas where there have been substantial flows of workers from particular countries who have not integrated into local communities. Areas (such as university towns) where EU citizens are scattered through and integrated into the community, on the other hand, tended to among those that voted most heavily to remain in the EU. These tendencies can be explained in terms of the likely effects of individual relationships with citizens of other EU countries on UK citizens’ social identities.
Abstract:
It is often presumed by social scientists and policymakers that support for public policies with redistributive implications will be increasing with individuals’ identification with the jurisdiction doing the redistributing – commonly the country (see Wright and Reeskins, 2013 for a survey). However, empirical findings regarding this intuitive relation are often mixed at best. Recent economic models building on the concept of Social Identity Equilibrium (SIE) as proposed by Shayo (2009), offer some insight into resolving this puzzle. These suggest that, in assessing identity’s link to redistributive support, it is often insufficient for researchers to ask only whether individuals identify with their country. Instead, relevant alternatives to national identification must be recognized explicitly: identification with an ethnicity, class, or region, for instance. Membership in these and other sub-national groups can play a decisive role in determining whether national identification has a positive or negative effect on redistributive support. In modelling identification with either a federal country or with one of its constituent regions, Holm (2016) and Holm and Geys (2016) show that redistributive support will be increasing in federal identification for people in wealthier regions, all else equal, but decreasing in federal identification for people in poorer regions. The formulation, then, must not simply be “national identification?” but rather national identification by whom and national identification as opposed to what?

The present project addresses this prescription directly. Using a survey-experiment with a priming manipulation, we examine the relation between national identification and redistributive support among local politicians. Our survey thus makes use of a novel survey population: unlike previous research on students or general household survey respondents, our subjects are exclusively municipal-level Belgian policymakers. As such, they are fully embedded in a region (Flanders) within a federation (Belgium) where regional attachments are often seen to be in conflict with one another, and with federal or country-level identification. Respondents are randomly divided into three groups: two treatment groups which receive either survey items priming federal (Belgian) identification or regional (Flemish) identification, and one control group which is not exposed to a prime. In this way we make federal or regional identities more salient via a fully exogenous manipulation – for a similar technique, see Balcells et al. (2015) and Kuziemko et al (2015). Subsequently all respondents’ support for redistributive policies is assessed using a battery of questions on (targeted) generosity and policy preferences. This allows a closer and more precise investigation than has previously been possible of the relation between regional and country-level identification, and their causal role in determining redistributive support. Results from Flemish respondents (N=869) offer strong and novel support of our rich region hypotheses. As our respondents exercise real discretion over local revenue and expenditure, our findings have immediate relevance to public policy.
“Experimental research on population growth projections”
Monday 13:30 (SUITE 686).

Behnud Mir Djawadi (Paderborn University) with Klaus Abbink.

Abstract:
Immigration continues to be one of the most prominent and most discussed topics in the political debate around the world. By the end of 2016, nearly 5.2 million refugees and migrants reached European shores, undertaking treacherous journeys from Syria, Iraq, Afghanistan and other predominantly Muslim countries torn apart by war and persecution (UNHCR 2018). For many European countries, this surge has been very sizable by historical standards, straining recipient countries’ capacity to respond to the humanitarian challenges, process asylum requests, and prepare for the integration of those accepted into the labour market and larger society (Aiyar et al. 2016).

The public opinion about this wave of migration has changed dramatically over the years bringing populists to power, most recently in Italy and Austria. One of the arguments which routinely whips up public sentiment against the Muslim refugees, is that the Muslim population will at some point become the majority of the host country. German Chancellor Angela Merkel, following a September 2017 election that saw the far-right Alternative for Germany (AfD) party gain a presence in parliament for the first time, agreed to a limit of 200,000 asylum seekers per year (Pew Research Center 2017). In the summer of 2018, the Bavarian conservative partners even issued Ms. Merkel an ultimatum to reduce the flow of migrants coming to Germany after registering in other European Union countries. With these security policies it is intended to restrict future migration in order to keep the share of the Muslim population to roughly 5%-6% of the German population (as it is now).

However, almost no studies exist that project the growing Muslim population in Germany for the next generations in order to demonstrate the claimed demographic trends. Instead, the only study that addresses the growing Muslim population in Europe, conducted by the Pew Research Center in 2017, comes to a different conclusion. The study models three scenarios that vary depending on future levels of migration. Already with zero and medium migration, the Muslim population will reach shares between 8.7% to 10.8% of the German population. In the high migration scenario this share increases even to roughly 20% (Pew Research Center 2017). As opinions about demographic trends seem to diverge extremely, we investigate to what extent laypersons are capable in correctly understanding population growth projections.

We therefore design an economic lab experiment in which we confront our student subjects with different migration scenarios. In the experiment, all subjects are in the role of the government and have to decide how many migrants to allow in the domestic country so that after 60 years from now, the share of migrants compared to the domestic population reaches a target threshold of 20% of the domestic population. Deviations below and above this target will be monetarily sanctioned. Subjects are presented 30 different scenarios varying in the following dimensions: equal vs. unequal fertility rate between the migrant and the domestic population, age structure of the migrant and domestic population is either equal or unequal, and there are situations in which chain migration is possible or not. The scenarios are held in neutral language. We talk of population “A” and “B” and that the mandate is to allow so many of population “B” to enter the country of “A” in order for the share of “B” to reach 20% of the whole population “A” by the end of the year 2079. Subjects will be given instructions with detailed information about the experiment, including information how to interpret
age pyramids, and how input data such as fertility rate, life expectancy, mortality rates etc. are used to calculate the expected projection growth of the two populations “A” and “B”.

The task in each scenario then works the same. Subjects press a start button that initiates a constant flow of population “B” to enter the country of “A” per year. As soon as the subject presses the stop button the flow of migration stops. Based on the number of “B”-people that subjects allowed to enter the country the population growth will be projected based on the parameters of the corresponding scenario. The projection of the population growth is based on standard assumptions and calculation techniques that are used by the German government and the Pew Research Centre. At the end of the experiment each subject is informed how far her decision was from the optimal solution and be paid according to her decisions in all 30 scenarios.

The experimental approach is ideally suited to investigate causal relationships, i.e. identifying which of the parameters (age structure, fertility rate, amount of migrants per year) lead subjects to more or less accurate forecasts about the population growths while leaving other variables constant. Especially in the scenarios where there are significant differences in the age structure and the fertility rates between the domestic and the migrant population, we have strong reasons to believe that subjects will make errors. In particular, the underestimation of the long-term effects that will be unravelled with some lag in the future will lead subjects to allow too many of the “B” population to enter the country, so that the given threshold will be significantly exceeded. This would mean that subjects press the stop button far too late than a correct assessment of the situation would entail.

The series of experiments will be conducted in June 2019 at the Business and Economic Research Laboratory (BaER-Lab) at Paderborn University, Germany.

We see this research of crucial importance for the following reasons: firstly, effective policies require the correct assessment of the population growth. If systematic errors exist in evaluating what consequences the differences in age structure and fertility rates between the domestic and the migrant population have, then policies regarding future immigration and labour market integration may fail to meet the desired outcome. Secondly, beyond the debate over the economic consequences of immigration, there is also an emotional dimension that shapes sentiments toward immigration. Citizens who understand which factors influence future population growth may call for changes in the current governmental agenda. For example, instead of calling for a cap for future migration, policies for better integration of migrants into the domestic society might be more favoured. Hence, profound knowledge about the dynamics driving the domestic and the migrant population growth will be extremely helpful for laypersons to judge the usefulness of specific governmental policies.
“Impact of gender and pre-violation trust on trust dynamics after an apology”

Anna Macko (Kozminski University).

Abstract:
An apology is a common strategy to rebuild trust after its violation. However, the dynamics of repairing trust after an apology is not fully understood. The goal of this study was twofold. First, it aimed at examining gender differences in the effectiveness of the most basic form of apology (expression of regret) and in the pace of trust’s restoration. Second, it examined whether pre-violation moderated gender effects in trust dynamic after the apology. Two hypotheses were tested. First, it was hypothesized that women would respond more favourably to the apology but will restore their trust at slower pace than men. Second, it was hypothesized that pre-interaction trust level would moderate gender differences in responses to the apology and the pace of trust restoration. There would be little gender differences in the group of people with high pre-interaction trust and significant gender differences in the group of people with low pre-interaction trust.

160 participants played 19 rounds of trust game divided into 7 stages: Stage 1 (initial trust, IT), Stage 2 (trust building, TB), Stage 3 (trust violation, TV), Stage 4 (apology, Ap), Stage 5 (immediate repair, IR), Stage 6 (short-term repair, STR), Stage 7 (long-term repair, LTR).

Results revealed gender differences in trust before the violation and in the pace of restoring trust to the pre-violation level, after the apology. Men revealed higher trust in Stage 1 (IT) and Stage 2 (TB) and in three stages after the apology – Stage 5-7. In Stage 3 (TV) gender differences were marginal, but in Stage 4 (Ap) no gender differences were found. Comparisons of trust levels in Stage 2 (TB) and in stages after the apology – 5-7, revealed that women’s pace of trust restoration was slower than men. Men’s trust returned to the level from Stage 2 (TB) in Stage 6 (STR) while women’s in Stage 7 (LTR).

Moreover, comparisons of high trustors (entrusting above median amount in Stage 1 (IT) - before any interactions with the trustees) and low trustors (entrusting median and below median amounts in Stage 1 (IT) revealed some significant gender differences but only in low trustors group.

“The impact of trust on corruption”

Hans Czap (University of Michigan – Dearborn) with Kanybek Nur-tegin, Stefan Ragnarsson.

Abstract:
Theory predicts that societies with higher social capital, as indicated by more trust among citizens, tend to have lower levels of government corruption. This hypothesis has been difficult to evaluate empirically because of widespread reliance on aggregated, country-level measures of trust and corruption, and the possibility of reverse causality. In this paper, we utilize micro-level international data from 34 African nations and two alternative measures of both trust and corruption to re-evaluate the evidence of this theorized relationship. To account for reverse causality, we use
historical Trans-Atlantic slave exportation data as an instrumental variable. Slave trade has lowered interpersonal trust in Africa, which in turn affected past and present levels of corruption. Our findings indicate that higher trust leads to lower levels of corruption. This result is robust to alternative specifications of regression models, including different measures of trust and experienced versus perceived types of corruption.

“The effects of feeling (un)trusted on exploration in an ambidextrous decision task”

Monday 13:30 (SUITE 688).

Marie Briguglio (University of Malta) with Johanna Grünauer, Vladimír Novák.

Abstract:
The increased use of private vehicles has resulted in numerous health and environmental issues, raising concerns among citizens and pressures on authorities to alleviate the problem. Traffic congestion and insufficient parking availability also result in time and productivity losses. In order to mitigate this problem, a popular policy solution is to try to stimulate modal shifts towards public transport. Car sharing has more recently emerged as a novel solution - a way to rent cars stationed around cities to be used for the duration of a trip. This study presents a hypothetical car sharing service to respondents using an online survey aimed at determining the factors determining uptake. The context is Malta, a European Union country with one of the highest cars per capita in the world and acute problems of congestion and emissions. Here a car-sharing facility was proposed in 2018.

Ahead of the launch of the service, just over 400 respondents were randomly assigned to four different scenarios including 1 control group and three which mentioned government, the private or an environmental NGO as the service provider respectively. Respondents were subsequently asked for their willingness to pay (WTP). The survey continued for a few weeks after the launch of the actual car sharing service in Malta. This also enabled the testing of differences in WTP in a hypothetical versus the actual market scenario. Difference in means and regression analysis were then applied to the data collected to test what determines willingness to participate and pay.

The findings indicate that respondents are more likely to share within a scheme launched by the private sector and that WTP in a hypothetical scenario (pre-launch) was much higher than the willingness to pay once the service was launched. Regression results also show that both willingness to engage in the scheme and to pay are negative in cars per capita within households, and that very few people would be willing to sell their car to rely on car sharing services. Together these findings suggest that the car-sharing scheme would not necessarily mitigate congestion issues but could actually compound them in the short run as more cars are placed on the street by the private sector service provider. These findings have important implications not only for policy and the design of the service, but also for the literature that relies on contingent markets for analysis.
“Residential discrimination and trustworthiness”
Monday 13:30 (SUITE 688).

Ondřej Krčál (Masaryk University).

Abstract:
Research question and method
There is some evidence that people are discriminated based on where and how they live (see e.g. Golabek-Goldman, 2016; Bonnet et al., 2016). This paper combines a field experiment and a laboratory experiment to test the presence of residential discrimination in the labour market and to study a possible mechanism behind the discrimination.

In the field study, we sent 1,347 job applications (short cover emails with CVs) to 449 calls for low-qualified front-desk jobs in Brno, Czech Republic, during 2018. The CVs different in two aspects: in the address signalling the quality of neighbourhood and housing (three versions), and in the quality of the applicant (high and low job fluctuation). The CV study has a 3×2 treatment design. The quality of neighbourhood and housing was measured within-call. We sent three CVs to every call, one has an address of a flat in a good neighbourhood, one a flat in a bad neighbourhood and one of a dormitory room in a bad neighbourhood. The quality of the applicant in these CVs was randomly varied. We measure the response rate, i.e. whether there was any positive reply to the email with the CV. To any positive response, we immediately responded that the applicant is no longer interested in the job offer.

The evidence from the field study was complemented with a laboratory experiment conducted with 160 students at the MUEEL laboratory in Brno in March 2018. The subjects were senders in a trust game played with participants of a randomized-controlled trial with homeless families (Rapid Re-Housing project) that started in Brno in Autumn 2017. The Rapid Re-Housing project was aimed at families (mainly mothers with children) in housing need in the city of Brno. Out of the population of around 420 families, 50 families were randomly selected into the treatment group and received a rental contract for municipal flat and social services mainly related to their new housing situation, while another 100 families were selected into the control group with no housing or social assistance. Student subjects in the lab experiment were shown a truthful description of their trust-game receiver family, which included information about the number of children, income and housing situation. While the other aspects remained the same for all receivers, the variation consisted in the housing information. Senders were told that the receiver families lived either in a dormitory, or in a standard municipal flat, or they used to live in a dormitory but got a rental contract for a municipal flat (for which they did not need to meet any conditions or requirements). The decision screen also contained description of the housing types. While the municipal flats are apartments of standard quality, in dormitories the family typically lives in one low-quality room with kitchen and bathroom shared with other inhabitants of the dormitory.

In the laboratory experiment we measure not only the amount sent (one of these discrete choices 0, 30, 60, 90, 120, 150 CZK), the students are also asked about how much money they expect a family that received 180 CZK (60 CZK was sent) would send back. Each student fills out 4 different tasks: 2 amounts sent and 2 expectations. One of these tasks is randomly selected, paired with the data from the receiver family and paid out to students. If expectations were selected for payment, people received a prize if their guess was close to the real amount sent back. The difference between
dormitory and flat is measured within-subject, i.e. each student is asked about the amount sent and expectations for a family living in a flat and in dormitory. The information whether the flat was granted by the city is randomly assigned, i.e. measured between subject.

Results
In the field study, we find that a relatively large and statistically significant effect of the neighbourhood. The response rate is by 25% higher for applicants in a good compared to a bad neighbourhood (the response rate of 0.185 vs 0.149). The difference between the flat and the dormitory in a bad neighbourhood is small (a 6% increase compared to dormitory) and not statistically significant at the 10% level. This could be because most people on the job market who live in dormitories are long-distance commuters who use dormitories only during the week (i.e. it signals time flexibility rather than of anything else), so it is possible that the word “dormitory” in the address of the CV did not provide a sufficient signal about the housing situation of the applicant. This study shows that the first-stage screening process of the job market reacts to the neighbourhood the applicant lives in, the laboratory experiment studies whether housing conditions affect people’s trustworthiness, which might be one of the explanations for the differences in the response rates.

Trustworthiness in the lab experiment is measured by the expected amount returned. We find that people expected that families in dormitories would send 34 CZK less than families living in flats and about 23 CZK less than families who used to live in dormitories and now live in flats. This shows that housing affects senders’ expectations about the trustworthiness of the receivers. They react not only to the difference between dormitories and municipal flats (within-subject) but also to the previous history of flat owners: families who lived in a dormitory and received municipal flat without any additional requirements are less trustworthy.

The findings of this paper suggest that people’s trustworthiness is affected by their housing status and that differences in housing status might have an impact on the success of workers in the labour market.
PARALLEL SESSION 3 (MONDAY 15:30)

Environment 1 (HOGAN 1)

“Taxing waste to stimulate home composting - Behavioural insights”

Monday 15:30 (HOGAN 1).

Marie Briguglio (University of Malta).

Abstract:
Biodegradable waste constitutes the largest single fraction of municipal solid waste, poses treatment and land-filling problems and is subject to specific EU targets. Despite the environmental and economic benefits of home-composting, the determinants of this particular waste stream, and the potential of a waste tax to induce it, has received little attention in economics. The present study specifically examines the potential of a waste tax to reduce waste and encourage substitution of biodegradable components into composting examining behavioural insights pertinent to the design of such a tax - including effect of a tax label, the potential that the tax stimulates illegal waste disposal intent and the risk that the tax crowds out moral motivation.

Data is drawn from a nationally representative survey (n = 1,037) in Malta, in which respondents were randomly assigned to different tax treatments. Econometric analysis is conducted with a view to establishing the determinants of initial behaviour and intent. The study finds that in the absence of a tax, access to a garden or rural area enhances the probability of composting, while perceptions of nuisance significantly suppress it. The introduction of a fee and raising its level, but also simply labelling it as a “Pay as You Throw Tax” significantly reduce waste disposal intent, encouraging substitution into home-composting. The findings also suggest, however, that there is a significant risk of stimulating illegal waste disposal intent. Substitution is mainly driven by the reactions of household members that hold government in low trust. Higher taxes also seem to negatively impact moral motivation among some households.

These findings suggest that introducing waste taxes may generate behavioural reactions beyond those that respond to price. Some of these can partly off-set the expected economic benefits of waste reduction and composting.

“Nudging sustainable consumption: Reducing intention-behavior gap by changing consumers’ purchasing habits”

Monday 15:30 (HOGAN 1).

Maja Petrushevska (HHL Leipzig Graduate School of Management).

Abstract:
Sustainable consumption, time and again, increases its importance. Consumers show intentions to buy sustainable products; nevertheless, they often fail to do so as a result of their purchasing habits, and therefore creating the intention - behavior gap. The paper refers to the link between the intentions, habits and behavior and explains how habits interfere with intentions as a consequence of the automatic, unconscious nature of performing habitual behavior. Theoretical background for
this link was found in the Dual-Process Theory, The Theory of Interpersonal Behavior and The Goal-Setting Theory. Furthermore, by exploring the existing literature on habitual behavior, the author set the stage by explaining how to break old and create new habits. As habits are behavior, which is automatically cued by the environment, it is argued that these cues can be used to change consumer’s behavior towards helping them to achieve their initially created intentions to buy sustainable products. Relating to the goal of the paper, it is suggested that implementation of behavioral interventions - nudges can change consumers’ habits by changing the environmental context in which they make automatic decisions. For this reason, a theoretical behavior change model is presented. The model shows phases of possible consumer behavior change and set of System 1 and System 2 nudges to nudge consumers through (1) disrupting stable environmental context, (2) triggering deliberate conscious thinking (3) supporting frequent repetition, where each of them relates to specific System 1 or System 2 from the Dual Process Theory. Furthermore, classification of self and social nudges is proposed, based on systematic literature review of the existing empirical and theoretical papers on reducing the intention behavior gap in sustainable consumption.

“Impact of meditation on subjective temporal discounts of monetary rewards”
Monday 15:30 (HOGAN 1).

Madeline Quinlan (London School of Economics and Political Science).

Abstract:
The recent explosion of research on mindfulness and meditation has spanned numerous fields and touted a variety of benefits to practitioners. There is less literature, however, investigating impacts of meditation on cognitive biases, specifically temporal discounting – the tendency to place higher value on immediately available rewards – resulting in lower self-control and higher current consumption. This work looks to determine whether a brief mindfulness meditation can significantly decrease subjective temporal discount rates. Previous research provides support for four mechanisms common to meditation and temporal discounting: 1) activation of common brain regions 2) temporal distance effects 3) resistance to ego depletion and 4) reduction of automaticity in judgement. These, taken within the context of mixed reviews and criticism of certain meditation literature and a call for better rigor of study, shaped the experimental design herein. 249 participants took part in a randomized control experiment at the London School of Economics and Political Science Behavioural Research Lab, randomized into three listening conditions: a podcast control recording, a jazz music track, and a guided meditation. Participants completed Kirby’s Delayed Discounting Task (DDT) to calculate implicit temporal discount rates, as well as Mindfulness Attention Awareness Scales (MAAS) to measure both state- and trait-mindfulness. Contrary to expectation, those participants in the meditation treatment group exhibited significantly higher temporal discount rates and present bias. Further, trait-mindfulness did not predict lower discount rates exhibited by participants. I present two alternative explanations for this thought-provoking result: temporal focus & priming effects and backfiring of ego depletion resistance. Overall, this significant finding calls for further investigation into the relationship between mindfulness, meditation, and temporal discounting, ensuring that potentially backfiring meditation interventions are not used in the field.
Abstract:
Climate change is one of the most pressing issues facing policy-makers today, and Ireland’s record on climate action is widely accepted as being disappointing. Part of the explanation for this lies in the uncertainty about what action Ireland can and should take, and uncertainty about how acceptable any climate action will be to various groups in society. In this context of uncertainty, how a problem is framed can have a significant impact on subsequent decisions taken to address that problem. This paper examines if and how behavioural economics and the framing (or reframing) of climate action can lead to more progress in this challenging area.

The paper takes a behavioural political science approach and looks at the impact of four factors – irrationality, ideology, interests and institutions (the four I’s) – on climate action policy as understood by policymakers and decision-makers. It then examines how the framing of climate action might prompt more shared understanding of climate action and address the barriers to progress presented by the four I’s. The paper suggests that framing should be actively considered in the design of communication and social-change campaigns.

In the paper, the opportunity for a strategic framing exercise for climate action in Ireland is examined. Framing climate action as ‘resilience’ might drive climate action. It is a familiar frame, used recently in Irish enterprise policy and as such might resonate with enterprise policy actors. The paper provides an examination of how, when, and by whom a new frame would be established in Ireland. Key aspects of such a strategic framing exercise include: the need to clarify the frame’s meaning; to consider potential misuse of the resilience term; to avoid promoting an unrealistic win-win narrative; and to be aware of the limitations of the resilience frame.

In its conclusion, the paper points to the critical importance of recognising and addressing the need for a shared understanding and the impact of the four I’s of irrationality, ideology, interests and institutions, and makes the case for strategic policy framing as one response, acknowledging its pitfalls. While there is potential for the lessons of behavioural economics and a strategic reframing process in Ireland to help decision-makers, it is a process that must not be undertaken without careful planning and execution, as well as determination. Should that potential be realised, behavioural economics can help policy-actors and decision-makers in Ireland devise and take climate action which would move us closer to our stated ambition in this crucial area.
“Individual differences in financial behaviour”
Monday 15:30 (HOGAN 2).

Dominika Maison (University of Warsaw).

Abstract:
Financial behaviours like saving, spending, insuring, or borrowing are very often explained by the level of a person’s income. This economic perspective assumes that human behaviours are rational. In the presentation will be discussed evidences coming from different researches (quantitative and qualitative) that consumer financial behaviour is not as rational as was assumed earlier and is very related to psychological features of the person. Therefore, taking into account individual, psychological features when explaining financial behaviours makes it possible to better foresee the seemingly irrational economic decisions (e.g., why a low-income person buys expensive things). In the first step quantitative research (CAWI) on nationwide representative sample (n=1048 respondents) was conducted. In the questionnaire were included various individual psychological factors, which were (a) non-specific (not related to finance), like conscientiousness, neuroticism, locus of control, self-control, time-perspective, life-satisfaction, values and (b) specific (related to finances), like attitudes towards money, Money Spending Style, Love for Cash, perception of financial situation, and materialism. Based on this data cluster analysis (K-means) was performed and 7-segment typology of consumers differed in financial attitudes and behaviours was created. Extracted segments were: (a) Banking Leaders (12% of population) – most optimistic and successful in life group, with internal locus of control, having the best financial situation and the most mature financial behaviour (good money management, having savings, protecting financial future, using new technologies in finances); (b) Cautious with Banking (12%) – relatively similar to previous segment but less active, less modern, using banking only on the basic level (e.g. having bank account but not using mobile banking); (c) Entering Life (14%) – young, starting their independent life: first job, just married, first child, on the one hand they are happy with their lives but, on the other, have a certain degree of entitlement, to some extent materialists, valuing money, expensive goods and position, they like spending money and not always controlling them; (d) Unfulfilled Indebted (10%) – they have quite a pronounced sense of injustice and a low sense of control of their own lives (external locus of control) – they do not feel responsible for their life situation and are rather focused on finding the reasons for this in external factors, they have loan, cash credit and mortgage repayment burdens; (e) Family-oriented Non-Materialists (15%) – the family is a genuine value to them and most of their life decisions are subordinated to their family, they are extreme non-materialists, money is not related to a sense of their self-worth nor do they perceive other people’s value through the prism of money or possessions, they demonstrate average banking service use and mainly on a basic level, hardly using online banking services at all, don’t use paying cards or credit cards often; (f) Entitled Materialists (17%) – they are very materialistic and they are persons with a high life dissatisfaction in all aspects, they have a sense of entitlement and external locus of control, they have basic level of banking (e.g. without using online banking or paying card), they have high level of love cash, they easily take loans (especially pay-day loans); (g) Financially Withdrawn (20%) – they are not very happy with their lives (definitely below average) but, contrary to the previous segment, they have a strong sense of injustice and “blame” external factors for their misfortunes, they are
passive, and even if they are dissatisfied with their lives, they don’t do much to change this, they perceive their financial situation more negative than it is, they don’t like banks, are against insurance, saving, protecting financial future, mainly use cash and have big emotional pleasure with physical contact with money (high level of Love-for-Cash). All segments differed in financial attitudes and behaviours: saving, spending, insuring, and borrowing. Further analysis (e.g. regression analysis) showed that the relationships between the individual characteristics of a person and its various financial behaviours is stronger than between demographics and those financial behaviours. In the next step qualitative research (21 IDIs) was conducted where further financial behaviours and reactions of different segments toward different communication of financial products and institutions were explored.

“Rational agents and the determinants of effective financial literacy: The importance of capabilities, information, framing, defaults and institutional parameters to smart and optimal financial decision-making”
Monday 15:30 (HOGAN 2).

Morris Altman (Newcastle Business School, University of Newcastle, Australia).

Abstract:
A basic premise of this paper is that rational or smart agents can make poor financial decisions as a result of their preferences (preference function), financial illiteracy, and their decision-making environment. Poor financial decisions need not be a consequence of hard-wired biases of the human decision-maker—it need not have a neurological basis. Error and biases in decision-making is not a natural imperative of the human condition. Also, rational agents need not necessarily make good financial decisions—such optimal decision-making is also not hard wired in the human brain. I argue that it is important to model the reality of financial illiteracy as it relates to a robust understanding of actual human behaviour and their decision-making environment. Empirically, we know that financially illiteracy is a fact of life and it is costly in terms of lower levels of social welfare and individual wellbeing. I introduce the term Effective Financial Literacy to connote a situation where agents are financially literate, have the capacity to make financial decisions, have experience in making financial decisions, and apply correct mental models. One can benchmark optimal financial decisions from the perspective of the necessary conditions for Effective Financial Literacy. Effective financial literacy can be modelled as a function of a number of core variables. But in this modelling scenario, in terms of necessary and sufficient conditions, basic financial knowledge, can’t be regarded as a necessary and sufficient conditions for effective financial literacy. Institutional parameters also matter. Efficient financial decision-making also requires an appropriate financial decision-making environment. It is, therefore, important to separate the effects of financial education from the financial decision-making environment. Overall, the impact of financial education of the quality of financial decisions is conditional upon the quality of the financial decision-making environment. This perspective is most consistent with the bounded rationality approach to behavioural economics. It has implications for policy in terms of developing financial decision-making capabilities of decision-makers and for institutional design. This approach or modeling also suggests that a key to establishing effective financial literacy probably has more to do developing adequate decision-making capabilities and appropriate decision-making environments as opposed to nudging (hard or soft) individuals to behave ‘optimally’.
The availability bias and the cryptocurrency market: A CAPM and behavioural finance approach

Monday 15:30 (HOGAN 2).

Stuart Mills (Manchester Metropolitan University).

Abstract:
Insights from behavioural economics and behavioural finance suggest investors in stock markets suffer from the availability bias – the tendency to make decisions based on salient information. However, what may be a bias may also be interpreted as a rational adjustment; bad news might justify the selling of stocks, or greater information might reveal new opportunities for investment.

This paper argues the emergent cryptocurrency market is uniquely positioned to investigate the presence of the availability bias, as the fundamentals of all assets are very similar, the knowledge gap between experienced and inexperienced investors is very small, and market institutions that may shield investors have not yet developed. Utilising a CAPM approach to estimate crypto market returns, a behaviourally informed model of (over)confidence and various proxies for availability such as Google Trends data, compelling evidence of the availability bias is found.

This paper informs discussions on the behaviour of the newly emerging crypto market while contributing to the wider behavioural finance literature. Further, this paper advances efforts to apply traditional and behavioural models, such as CAPM, to this new market.

Derivatives or anchoring? This is the question

Monday 15:30 (HOGAN 2).

Naveh Eskinazi (Ben Gurion University of The Negev) with Miki Malul, Mosi Rosenboim, Tal Shavit.

Abstract:
A large amount of literature has discussed about the ubiquitous phenomenon of the 'Anchoring' heuristic Tversky and Kahneman (1974) in human decision-making process. Some of the interesting applications, with students in laboratory controlled settings though, have shown anchoring in domains of general knowledge (Epley and Gilovich, 2001, McElroy and Dowd, 2007, Mussweiler and Englich, 2005, Mussweiler and Strack, 1999, Mussweiler and Strack, 2001a, Mussweiler and Strack, 2001b, Strack and Mussweiler, 1997) and probability estimates (Chapman and Johnson, 1999, Plous, 1989). Some other works, involving 'real-world' decisions, have shown that the effect of anchoring is robust in domains such as legal judgments (Englich and Mussweiler, 2001, Englich et al., 2005, Englich et al., 2006, Englich and Soder, 2009), valuations and purchasing decisions (Ariely et al., 2003, Mussweiler et al., 2000, Wansink et al., 1998), forecasting (Critcher and Gilovich, 2008), negotiation (e.g. Galinsky and Mussweiler, 2001) and self-efficacy (Cervone and Peake, 1986).

To our knowledge, the anchoring effect hasn’t been investigated within the domain of derivatives. Derivatives are defined as entities that their value is derived from the value of something else (i.e. underlying entity). The present article is intended to explain whether the differences between the value of a direct and derived entities are stemmed from a derivative mechanism or anchoring.

To investigate the differences in values, 1,485 US-American participants were recruited with a HIT posted on Amazon’s Mechanical Turk online platform (MTurk). The participants received $0.35 in their Amazon.com account for successfully completing the HIT. The participants took an online
questionnaire hosted on Qualtrics.com. During the experiment the participants were asked to complete a pricing task of a lottery, in addition to reflection of their risk preference, emotions, time preference and additional demographic and general questions. Pricing Tasks and Anchors were manipulated between participants, resulting in a 4 (Task: WTP vs. WTA vs. WTS vs.WTAV) x 4 (Anchor: None x High x Low x Letter) between participants design. The participants were asked to bid/ask for a hypothetical lottery in $.

Preliminary results have shown main effects of anchor and pricing task. There was an effect of low anchor and high anchor, but no effect of derivative [comparison of a direct lottery (i.e. No- Anchor lottery) to a Letter-Anchored lottery]. In addition, differences between pricing tasks were significant. Moreover, an interaction effect between anchor and pricing task has been found. Across all pricing tasks, the bids/asks where affected by the high anchor but not by the low anchor and derivative.

Furthermore, we've conducted four different multivariate regressions were the WTP, WTA, WTAV, and WTS were the dependent variables. Each variable was regressed on the same variables such as age, gender, anchor type, positive and negative emotions, risk preference, time preference, participation frequency in lotteries and time to bid. However, the resulting independent variables in each regression weren’t identical.

For WTP, the results have shown effects of time to bid (Bid is lower as time increases), high anchor (Bid is higher when high anchor is presented), time preference (Bid is lower for present lovers), and the interactions gender x high anchor (Females are less susceptible to high anchor) and age x high anchor (Older participants are less susceptible to high anchor). For WTA, the results have shown effects of time to bid (Ask is higher as time increases), high anchor, low anchor (Ask is lower when low anchor is presented), time preference (when the delay of large payments is higher, the ask is lower), and the interactions age x high anchor and participation frequency x high anchor (Frequency elicits participants to be more susceptible to High anchor). The results for WTAV, have shown effects of high anchor and the interactions gender x high anchor (Females are more susceptible to High anchor), age x high anchor and positive emotions x high anchor (Positive emotions elicit participants to be more susceptible to high anchor). Finally, the results for the WTS regression have shown effect of high anchor and the interactions risk preference x high anchor (less risk averse participants tend to be less susceptible to high anchor) and negative emotions x high anchor (Negative emotions elicit participants to be less susceptible to high anchor).

The above finding shed light on new fields that haven’t been researched yet in the domain of anchoring. First, an effect of an anchor which is an integral part of the asset (i.e. its not just an anchor that is related to the context of the decision concerning an asset). Second, testing the anchoring effect in a various pricing positions of buying, selling and taking on / avoiding commitments. Third, the pricing differences between simple and more complex assets is stemmed by the integral anchor and not by the difference in complexity (i.e. direct asset vs. derivative asset).

The novelty of this work is that the anchors that were used are the actual underlying entities which means they are embedded within the derived entity itself, as opposed to external or self-generated anchors (Epley and Gilovich, 2001, Epley and Gilovich, 2005). The novelty lies in the notion that in case we omit the underlying entity, it takes out all the gist from it. Testing how these embedded anchors affect the pricing of different lotteries may constitute a fertile ground for future research in a vast variety of domains not necessarily in the context of pricing only.

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“Provision of patient ratings improves quality adjusted life years estimates from the general”

Robert Murphy (Department of Health, Ireland) with Christopher J. Boyce, Paul Dolan, Alex M. Wood.

Abstract:
Objective: Governments allocate healthcare resources informed by the QALYs associated with different treatments. QALYs are derived from objective mortality data, weighted by general population views of the impact on subjective HRQoL of particular medical conditions. We introduce a simple change to improve the validity of QALYs by ensuring raters have more complete information on the conditions they judge.

Methods: General population participants (N=155) judged the impact on HRQoL of three health conditions using a standard methodology. The treatment group received information on how patients with the conditions rated their health status (on a 0-100 scale) prior to making their valuations, whilst the control group received the information after making their valuations. Both groups additionally indicated whether patients’ health rating was higher, broadly similar, or lower than previously expected.

Results: When patient health status was higher than previously expected, the treatment group provided higher valuations than the control group (d=0.56-0.89). When patient health status was as expected there was no difference between the groups. When patient health status was lower than expected, the treatment group provided lower valuations (d=0.31-0.44). ANOVA testing shows a significant interaction (p<.001). This is consistent with participants adjusting their estimates of the impact of a condition on their HRQoL in the direction of the health status of those experiencing the condition.

Conclusions: This simple change to existing methodology may provide a middle-ground in the debate around basing QALYs weights (a) purely on patient views, or (b) continuing to use the views of the general population.

“Stocking up or putting off? Durability versus procrastination in explaining transitory effects in the RAND health insurance experiment”

Kevin Devereux (University College Dublin).

Abstract:
I propose to identify the qualitative importance of intertemporal substitution effects and anti-present bias effects among participants of the RAND Health Insurance Experiment. Power to identify between the two mechanisms comes from their qualitatively different predictions of transitory effects in a temporary subsidy program. Specifically, intertemporal substitution predicts spending surges towards both the beginning and end of such a program, while anti-present bias predicts only a surge towards the end. With reasonable functional form restrictions both parameters may be estimated, allowing for prediction of a wide range of counterfactual policy proposals. In addition, the
long-run price elasticity of healthcare spending can be corrected to account for the transitory effects.

“Why is long-term care insurance and annuity uptake so low? Evidence of nonstandard preferences and limited rationality from a systematic review”

_Timo Lambregts (Erasmus University Rotterdam) with Erik Schut._

Abstract:
With aging populations, the role of private insurance in financing longevity and long-term care risks is likely to grow in developed countries. Yet, demand for life annuities (hereafter annuities) and long-term care insurance (LTCI) is very limited and lags behind standard economic predictions. Among the large number of theoretical and empirical studies analysing this contradiction, a recurrent explanation holds that adverse selection dampens insurance demand. Integrating these products in a life care annuity (LCA) may effectively mitigate such adverse selection. We performed a systematic literature review to gain an overview of all factors impacting demand for LTCI and annuities. Based on this overview, we discuss whether LCAs can indeed increase insurance uptake. Our systematic search rendered 3,945 unique hits and findings of 186 studies were integrated in our review. Results hereof suggest that not only adverse selection, but also substitution, nonstandard preferences and limited rationality are systematically and strongly associated with lower insurance uptake and that uptake is concentrated among individuals of high socio-economic status. Only focusing on reducing adverse selection is hence unlikely to provide a solution to the problem of low uptake levels and to extend the market to individuals with lower socio-economic status. Rather, a comprehensive approach should also appeal to individuals with nonstandard preferences and empower people to make informed decisions.

“Preferences for advance notice of death in a non-patient sample”

_David Comerford (University of Stirling)._ 

Abstract:
Current legal and ethical guidance recommends clinicians to reveal life expectancy information to their terminally-ill patients. Previous research has studied preferences over the receipt of this information in samples of patients but never in a non-patient sample. Theory suggests that preference may vary depending on whether one is in a “hot” emotional or “cold” state. Cumulatively, over two studies, 669 non-patients were presented with a hypothetical scenario that allows isolation of the preference for receiving information on time of death. I find that over a third of respondents would choose to not receive information on their predicted time of death and that this result is stable across question format manipulations. These data suggest that preference for receiving life expectancy information is substantially lower in a non-patient population than in a patient population. I suggest directions for future research.
Erik Hoelzl (University of Cologne) with Felix Pfaffe.

Abstract:
Throughout the year, individuals face various occasions in which the exchange of a gift from one person to another is common. Giving a gift to someone else provides benefits to the relationship of giver and recipient as it increases well-being, gratitude and reciprocity (Algoe, Haidt, & Gable, 2008). However, previous research has highlighted the various difficulties that arise in the context of gift giving. Givers may focus too strongly on the gift exchange situation instead of the benefits of the gift’s use (Galak, Givi, & Williams, 2016) or on gift attributes that are not that important to recipients (Flynn & Adams, 2009). In the light of the role gift giving plays for relationship maintenance, knowing what influences recipients’ gift evaluation is crucial to avoid potential damage to the relationship. Extending previous research on factors influencing gift evaluation, the current project tests how the perceived gift price and its level of affective intensity influence gift evaluation.

Whereas for product evaluation a higher price is often associated with higher perceived quality (see Cialdini, 2001; Gneezy, Gneezy, & Lauga, 2014), findings on how price influences recipients’ gift evaluation are mixed. In contrast to studies reporting a positive correlation of price and appreciation (e.g., Gino & Flynn, 2011), other studies found that more expensive gifts are not evaluated better than less expensive gifts (e.g., Flynn & Adams, 2009). Examining how perceived price influences gift evaluation, we hypothesized that recipients evaluate expensive gifts better than inexpensive gifts.

However, the effect of perceived price on gift-evaluation might depend on other critical dimensions that influence gift evaluation. As gift exchange often brings about various levels of affective reactions, we hypothesized that a gift’s affective intensity influences gift evaluation. In line with what the affect heuristic (e.g., Pham, Cohen, Pracejus, & Hughes, 2001; Slovic, Finucane, Peters, & Magggregor, 2007) suggests, we assumed that feelings towards the gift influence its evaluative judgment. More specifically, we hypothesized that recipients evaluate affect-rich gifts better than affect-poor gifts.

Price information and affective information may interact. Previous research on product evaluation reported that affect-rich targets trigger evaluation by feelings as opposed to evaluation by price more strongly than affect-poor targets (Hsee & Rottenstreich, 2004). That is, affect-rich targets make individuals less price sensitive. We applied the same reasoning to our study on gift giving and hypothesized that for affect-rich gifts recipients will become less price sensitive.

We tested our hypotheses in two studies for which we preregistered our predictions, sample size considerations and plan of analyses via aspredicted.org.

Study 1 was conducted via Amazon Mechanical Turk and comprised a final sample of 188 participants. Participants were randomly assigned to one of four conditions and read a vignette that illustrated a gift-giving scenario. They either imagined receiving inexpensive or expensive concert tickets for an unknown (affect-poor) vs. their favourite (affect-rich) band. Subsequently, we
measured gift evaluation (covering appreciation, satisfaction, perceived value, and reciprocity). Results showed a significant main effect for price as well as a significant main effect for affective intensity. A higher price as well as higher affective intensity increased gift evaluation. Furthermore, there was a significant interaction of both factors in line with our hypothesis; the influence of price was stronger for affect-poor than for affect-rich gifts, illustrating lower price sensitivity for affect-rich gifts.

We conducted a second study to test whether the effects hold when focusing on situations of real-world gift exchange and to test whether the results differ for gifts of more material versus more experiential nature.

Study 2 was an online survey, conducted a few days after Christmas via Prolific Academic. 475 participants evaluated a gift they had received recently (covering appreciation, satisfaction, perceived value, and reciprocity) and reported on its perceived level of price, level of affective intensity, and whether it was a more material or more experiential gift.

The results replicate those from Study 1 by showing a significant main effect for price, a significant main effect for affective intensity, and a significant interaction. For gifts with lower levels of affective intensity, evaluation was significantly positively related to price; with higher levels of affective intensity, the relation was weaker. Interestingly and in contrast to our prediction, a significant three-way interaction suggested that this pattern was more pronounced for more experiential gifts than for more material gift.

The findings offer insights into the interplay between cognitive and affective processes in gift evaluation. Whereas recipients evaluate more expensive gifts better than inexpensive gifts when gifts are of low affective intensity, they become less price sensitive when gifts are of high affective intensity.

Implications for gift givers are that gift recipients’ price sensitivity depends on affective intensity. If a gift is emotionally touching, its price matters less. However, in situations in which givers feel insecure about the level of affective intensity of a gift for the recipient, it may be better to spend more on a gift.

“Money as a symbol in the relationship between financial advisors and their clients”

*Monday 15:30 (DAVIN).*

_Edoardo Lozza (Università Cattolica del Sacro Cuore) with Cinzia Castiglioni, Federica Poli, Martina Ramponi._

Abstract:
Are financial advisors able to understand the symbols and meaning that investors associate to money? If so, what role does this ability play in the relationship between financial advisors and their clients?

In the financial sector, advisors play fundamental roles because they may help to reduce information costs between investors and portfolio managers, favour price discrimination and educate investors about financial risk and their investments. Most studies investigated consumers’ propensity to engage advisors by focusing on consumers’ personal characteristics such as age, education,
employment, income and net worth (e.g., West, 2012). Fewer studies have considered the ability of advisors to understand the symbolic meanings associated to money by investors.

The present work aims to fill this gap by investigating whether financial advisors can understand the deeper symbolic meaning that their clients attribute to money, and to what extent such ability can influence the quality of their relationship and its outcomes in terms of customers’ satisfaction.

To achieve that, we performed an exploratory study on a sample of financial advisors and their clients. An Italian bank was involved to collect the data, and 19 out of 20 financial advisors voluntarily took part to the study. The financial advisors helped to recruit some of their clients, for a total of 69 investors who completed the study. Two mirroring questionnaires were developed, one for the financial advisors and the other one for their clients. Among other measures, the questionnaires included Furnham, Wilson and Tefolrd scale (2011) to measure four emotional associations of money: security, freedom, power and love.

Results showed high correlations in terms of ability of the financial advisors to understand the symbolic meaning that their clients attribute to money. They also showed that higher levels of advisors’ ability to understand such symbolic meaning correspond to higher levels of customers’ satisfaction, trust, loyalty, clients’ referral and allocated money.

The relevance of this study is at least twofold. At theoretical level it offers a deeper understanding of the symbolic value of money, by adopting a psychological and psychodynamic perspective, suggesting that such symbolic meaning can influence individuals’ investment decisions. At pragmatic level, it can provide tools for financial advisors to better understand and advice their clients, by improving their relationship and customers’ satisfaction. Thus, this study offers relevant insights in the field of emotional finance, by showing how unconscious feelings and emotions may help drive both individual investment decisions and market activity.

Future research may build upon this preliminary evidence and overcome the limits of this study, e.g. by retrieving a bigger sample; by controlling for possible biases and sampling distortions (e.g., self-selection sampling); and by refining and developing further techniques to investigate deeper symbolic associations with money (e.g. projective tests).

“The Impact of cashless payment options on face-to-face fundraising - Evidence from a field experiment”

Konstantin Homolka (Trier University/ IAAEU) with Adrian Chadi, Laszlo Goerke, Sabrina Jeworrek.

Abstract:
Cashless payments are ubiquitous. However, previous research suggests that this is not the case for all kinds of economic transactions. When people are asked face-to-face to contribute for charitable giving, offering a cashless option (CO) affects individuals’ decision-making in such a way that some are deterred from giving.

To investigate this phenomenon in more depth, we conducted a field experiment in cooperation with the organizers of an art exhibition at a German university. After taking a guided tour, visitors were asked to fill out a feedback survey and to contribute for the purpose of continuing the
exhibition. As a first treatment, we randomly manipulated the opportunity to make a cashless donation. To check whether the findings are special to donation only, we additionally implemented two pay-what-you-want (PWYW) treatments (with and without manipulation of the cashless option) by asking to compensate the service of the tour, again for the same purpose.

Our results confirm that donors shy away from CO in all treatment conditions. Despite that, we do not find a negative effect of CO, neither in PWYW, nor in the donation condition. On the contrary, the number of donations increases in subsamples of non-student visitors and frequent debit card users.

“Characteristics of first adopters of new payment technologies and their financial behavior”
Monday 15:30 (DAVIN).

Mette M. N. Seldal (School of Business and Law, University of Agder) with Ellen K. Nyhus.

Abstract:
The purpose of this study is to investigate the characteristics of first adopters of new payment technologies and to address any challenges related to new payment technologies that should be handled through consumer guidance and/or protection. In particular, we will study if the first adopters have higher or lower financial literacy (FL) than the rest of the population and if adoption of new payment methods is related to other types of financial behaviour.

The global trend of consumer uptake and adoption of new digital technologies is affecting financial behaviour. New financial technology companies, so-called FinTech’s, are increasing their share of the financial services market - a development that is expected to accelerate after the implementation of the Revised Payment Services Directive (PSD2) in 2018 (OECD 2017). So far, knowledge about the effects of using the new technologies is limited, but some studies indicate that there are some negative consequences. Yakoboski, Lusardi et al. (2018) found use of mobile payment to be related to lower FL, and they linked the use of mobile payment to a higher likelihood of overdrafts and extensive use of credit cards among Millennials. On the other hand, Carlin, Olafsson et al. (2017) found that new financial technologies have had some positive effects for the users. More studies are needed in order to know more about the first adopters of new financial technologies and the advantages and disadvantages associated with the shift in technology. In particular, it is necessary to know if the users of new technologies have sufficient financial knowledge to understand the consequences of letting, for example, a social media company handle their financial transactions, and if use of new technologies make them more financial vulnerable.

We exploit data collected from a representative sample of 2201 Norwegians who participated in an online survey in June 2018. The survey included 101 questions, of which 50 were meant to assess the participants level of FL (Nicolini 2019). The FL questions covered ten different financial topics (interest, inflation, mortgages, savings, investment, pension planning, credit, payments, bank accounts, and bonds. The other questions asked about socio-economic characteristics (age, gender, income, housing situation, education level), various types of financial behavior (payment habits, saving, investments, mortgages and credit) and financial situation. Regarding FinTech’s, one question asked about the respondents' willingness to let third-parties get access to financial data
from their bank(s), and a second if they would be comfortable with letting a social media company (e.g. Facebook or Google) handle their money transfers.

Preliminary results show that a majority of the respondents say they will never let their bank(s) share their information (56%) or use a social media company for money transfers (75%). Men, the young (Generation Z and Millennials) and respondents with higher education were more positive to letting their bank(s) share information with a third party, and to use a social media company for their financial transactions than women, older generations and respondents with low education. Hence, we should expect to find a majority of early adopters amongst men, the highly educated, and the young.

A composite score of the two questions about using other companies than banks for financial transactions was computed to construct a “scepticism scale”. ANOVA was used to analyse the relationship between scepticism and FL. We found that participants who tend to give clear “yes” or “no” answers have lower FL scores and a higher number of “Do not know” answers to the financial literacy questions than others. The findings suggest that people with high FL scores are more hesitant than those with lower FL scores towards using new payment technologies offered by third parties if it indicates that they get access to their bank data.

Our research also shows that the users of technological payment services like mobile payment, online payment and contactless payment had a significantly higher FL score than non-users, which is contrary to what Yakoboski, Lusardi et al. (2018) found in their study. Also, in contrast to them we found that Millennials who use mobile payment seem to make less poor financial choices compared to non-users. This was also the case for every other generation group. They were less likely to find it difficult to pay their bills regularly, and a smaller proportion of them had e.g. taken up consumer loans to buy consumable products.

As we can see form our study, we expect to find a majority of early adopters amongst men, the highly educated, and the young. We also expect the participants with higher FL to be more particular when choosing whether or not to use a certain FinTech service than the rest of the population, which might indicate that some consumer guidance and/or regulations towards the group with lower FL should be considered. Perhaps one might also consider the same towards those who are currently not using technological payment services, as they seem to have more trouble handling their personal finances than their counter parts.
Biases & decisions 3 (SUITE 679)

“Trading in search of structure: Market relationships as a compensatory control tool”
Monday 15:30 (SUITE 679).

Agata Gąsiorowska (SWPS University of Social Sciences and Humanities) with Tomasz Zaleśkiewicz.

Abstract:
The contemporary world we are part of has two clear characteristics: the growing level of uncertainty and ambiguity (Ahir, Bloom, Furceri, 2018; Taleb, 2007) and the increasing commonness of market-like practices (Bauman, 2007; Kasser, 2016; Kasser et al., 2007; Sandel, 2012; Stanfield & Stanfield, 1997). We argue that these two characteristics are not independent, and their proximity may be explained by the fact that both of them are associated with the way people experience personal control and mastery. Rooting our model in the compensatory control theory, we propose that one reason behind the prevalence of market relationships is that the fundamental need for orderliness makes them psychologically appealing because of the structure they provide. In other words, engaging in and interpreting the world through the lenses of market exchange relationships might serve as a compensatory control tool because such relationships provide structure and orderliness.

Results of three correlational studies and twelve experiments conducted in different countries (United States, United Kingdom, and India) lent substantial support to this general hypothesis. Studies 1a and 1b demonstrated that participants perceived market relations as more structured, well-coordinated, well-controlled and efficient than communal relations. Secondly, examining the content in English fiction literature using Google Ngrams in Study 2 we found that market orientation—but not communal orientation—served as a suppressor in the relation between the lack of control and perceived structure, what suggest that market orientation might compensate for the lack of control and restore perceived structure.

After exploring the links between lack of control, market orientation and perceived structure, we studied the possibility that market orientation serves as a means of compensatory control by manipulating the degree of personal control and assessing the extent to which people were drawn to market relations. We investigated if threats to personal control stimulate the tendency to search for and prefer market relationships over communal relationships, and to interpret ambiguous social interactions as market rather than communal. More specifically, we tested whether threats to personal controlled participants to: (1) accept introducing monetary payments to a situation that was originally defined as communal (Study 3), (2) help more (Study 4) and more willingly ask for help in market rather than communal situations (Study 5), (3) perceive ambiguous social situations as more market-like (Studies 6a, 6b, and 6c), and (4) accept taboo trade-offs that are consistent with market rules but at the same time violate communal rules (Study 7). We demonstrate that effects indicating the propinquity between personal control and market relationships are the strongest for people with a low need for structure (Study 6c), but do not depend on either objective or subjective socio-economic status (Study 7). We also show that people chronically high in the motivation to search for structure are more prone to accept introducing market rules to situations that are usually communal than people low in this motivation (Study 6c).
Based on the compensatory control theory (Kay et al., 2008, 2009), we also propose that when people prefer market relationships while facing a threat to personal control, they do it because the structure provided by these relationships re-establishes feelings of control. For that reason, in the following experiments we investigated whether the involvement in market relationships is associated with experiencing greater feelings of control. We demonstrate that the salience of market relationships triggers the sense of personal control (Study 8) and evokes internal explanations of various positive and negative events (Study 9a and 9b). In Study 9a we also tested the hypothesis that the link between being exposed to market relations and finding personal control is mediated by perceiving structure in such relations. Study 9b failed to find support for the alternative explanation that the effect of market relationships on the sense of control is due to the visual salience of money. Finally, we tested the compensatory function of market relationships through the prism of hydraulic relationships with another source of external control (Kay, Shepherd et al., 2010). In Studies 10 and 11 we investigated whether the salience of market relationships reduced the need to search for other compensatory control tools in the face of external threats (the belief in a controlling God). We discuss why market relationships compensate for lack of control, provide real life instances supporting our argument, and refer to other disciplines to explain this phenomenon.

“Why Buddhist economics Is needed: Overcoming large scale biophysical and socio-economic dysfunctions”

John F. Tomer (Manhattan College).

Abstract:
According to mainstream economics, it is the self-interest motive (the invisible hand) that leads firms in competitive markets to supply what consumers want (consumer sovereignty). When markets function ideally, the result is said to maximize the net benefits to society. The purpose of this paper is to explain why, contrary to mainstream economics, competitive markets, for important noneconomic reasons, often fail to serve the best interests of society.

Akerlof and Shiller (A&S) in Phishing for Phools (2015) have given considerable thought to why markets too often fail. They fail when business people behaving in a purely self-serving way utilize manipulation, deception, and trickery to take advantage of their customers. This happens when buyers act foolishly for psychological reasons, for lack of information, and because they do not know what they want. Businesses learn about these unsophisticated buyers, prime them, and set a trap for them. The result is behavioural market failure: consumers wind up paying too much for products they do not need.

The A&S perspective needs integration with dual motive theory (DMT). According to DMT, self-interest derives from humans’ reptilian brain. Empathy derives from humans’ mammalian brain. According to a recent, important interpretation, self-interest is primal, and a person’s empathic capacity plays a restraining or conditioning role with respect to self-interest, especially when self-interest is excessive. Too often business people act out of excessive self-interest leading them to take unfair advantage of customers. The DMT perspective suggests this is not inevitable as humans can develop their empathic capacities and become less self-interested. If so, a business might
develop a socially responsible orientation and overcome its negatively opportunistic orientation. Integrating the A&S and DMT perspectives improves greatly understanding of why markets often fail for behavioural reasons and what can be done about it.

“Exploring the link between religiosity and honesty: An experimental approach”

*Monday 15:30 (SUITE 679)*.

**Maryam Dilmaghani (Saint Mary’s University).**

Abstract:

I. Motivation

Honesty is recognized as one of the pillars of moral behaviour and is endorsed by all world religions. In Abrahamic faiths, the universal clash of Good and Evil is also described as the confrontation of the Lie with the Truth. For instance, the Bible is explicit and unequivocal on the disapproval of falsehood in many verses John 8:44; Leviticus 19:11; Proverbs 17:7; Zephaniah 3:13). In Eastern religions, one of the meanings of dharma is truth; and, avoiding false speech is the Fourth Precept of Buddhism. The relationship between religiosity and honesty, however, has been scantily empirically explored (Batson 1976; Sapp et al. 1986; Perrin 2000; Huelsman et al. 2006; Randolph-Seng & Nielsen 2007; Tang & Tang 2010). This paper experimentally investigates the link between religiosity and honesty.

Honesty is documented to be important for various socioeconomic outcomes, such as economic development, the level of corruption in the country, trust, and quality of life (Dreber & Johannesson 2008; Gundlach & Paldam 2009; Acemoglu & Robinson 2013; Abeler et al. 2014; Hugh-Jones 2015). Recently, a novel experimental design has been proposed to measure the tendency to be honest, across populations and demographic groups (Fischbacher & Follmi-Heusi 2013). In this experiment, participants receive a die that they roll privately. Their payoff depends on the reported number of dots on the top face of the die (e.g. $2 per dot). The subjects have an incentive to be dishonest and report higher numbers to get a higher payoff. The experiment is anonymous and done in private; cheating, therefore, cannot be detected at the individual level. But the underlying true distribution of the outcome under full honesty is known (the expected value of rolling a fair die). The rational choice framework predicts that the subjects should be dishonest, to maximize their personal gain. Fischbacher & Follmi-Heusi (2013), however, find that only about 20% of the subjects lied to the fullest extent possible, and 39% of the subjects exhibited total honesty.

The scholarship using this experiment is rapidly growing (Jiang 2013; Ariely et al. 2015; Pascual-Ezama et al. 2015; Dufwenberg 2016; Gächter & Schulz 2016; Kocher et al. 2016; Potters & Stoop 2016; Dai et al. 2017; Kajackaite & Gneezy 2017; Khalmetski & Sliwka 2017). Various sociodemographic characteristics are being identified as predictors of honesty, across populations. For instance, Ariely et al. (2015) provide strong evidence that German citizens who grew up under the communist regime have a significantly higher likelihood of being untruthful about the outcome of their die-rolling.

A sizable body of interdisciplinary research has examined the link between religiosity and morally desirable behaviour, such as fairness, cooperation, and altruism (Henrich et al. 2001 & 2006; Sosis & Alcorta 2003; Norenzayan & Shariff 2008; Tan & Vogel 2008; Xygalatas 2013; Purzycki et al. 2017). An excellent review of this literature can be found in Hoffmann (2013). The new die-rolling
The experiment of Fischbacher & Follmi-Heusi (2013) has not yet been widely applied to the scientific study of religion. Its application, however, constitutes a significant contribution. Since, previous studies applying incentivized experimental methodology to the context of religion have tackled the effects of religiosity on virtues such as cooperativeness, trustworthiness, and fairness, which all have interpersonal, intergroup, or intragroup ramifications (Sosis & Alcorta 2003; Henrich 2009; Hoffmann 2013; Purzycki et al. 2017). Previously, no attention has been paid to the effects of religion on “pure morality,” that is, moral behaviour without tangible consequences for others involved in the interaction.

A deviation from morally desirable behaviour, i.e. dishonesty, in the experimental framework proposed in Fischbacher & Follmi-Heusi (2013), does not entail a gain at the expense of another subject, as is the case in trust and cooperation experiments (Norenzayan & Shariff 2008; Tan & Vogel 2008; Hoffmann 2013; Xygalatas 2013). This study, therefore, allows the empirical exploration of the link between religiosity and a facet of moral behaviour which has no other-regarding consequence.

II. The Experimental Design
A replication of Fischbacher & Follmi-Heusi (2013) was designed, in which the subjects also answer a set of survey questions, gauging their degree of religiosity. The design underwent the Ethics Board Review at Saint Mary’s University, and was awarded a research grant of $6,000.

A pool of subjects was recruited to participate in a “game of chance.” They were asked to roll a die in private 40 times and record the number of dots on its top face. The subjects were told that at the end of the game, two rounds of their die-rollings would be randomly selected (the subjects drew numbered-chips from an opaque bag), and they would receive payments ($2 per dot), as a function of the number of dots they have recorded in these two random rounds. The subjects have an incentive to be untruthful in reporting the outcome of the die-rollings, for personal gain. This personal gain does not come at the expense of any other participant. Therefore, the design is suitable to isolate the tendency to be honest in “abstract,” rather than for reasons such as fairness, altruism, or fear of reprisal. In parallel to this task performance, the subjects were anonymously surveyed on a number of sociodemographic variables, such as age, gender, country of birth, and field of study.

To investigate the link between religiosity and honesty, three religion-related questions are surveyed: (i) What is your religion? None/ Name...; (ii) How frequently do you practice your religion by yourself? Daily/ At least once a week/ At least once a month/ At least once a year/ Never; (iii) How frequently do you practice your religion with other worshipers? With the same response options. Acknowledging that such religion related questions can possibly “prime” the subjects on morality, and affect their behaviour (Pichon et al. 2007; Willard et al. 2016; Yilmaz & Bahçekapılı 2016; Northover et al. 2017), the survey includes a wide array of other, similarly formulated, “distracter” questions, such as, Do you practice sports? / How frequently do you practice sports by yourself? / How frequently do you practice sports with others?

The “distracter” questions go on to include movie-going; watching recorded movies/TV shows; watching movies/TV shows on-line; playing video games; playing board games; playing on-line games; updating one’s social media profiles; eating out; and going to live-music events.
III. The Preliminary Results

Owing to the grant from the Faculty of Graduate Studies and Research of Saint Mary’s University, in the first round of the experiments, 82 subjects have been recruited and the experiment was run on these subjects. The collected data were analysed. The preliminary results indicate that, on average, the subjects have over-reported the number of dots they have obtained, as explained below.

The expected value of one round of die-rolling is 3.5. Since the die was rolled 40 times, the overall Expected Value is: $3.5 \times 40 = 140$

The Figure below illustrates the distribution of randomly generated values for 82 subjects (akin to the values likely resulting from truthful reporting) against the actual reports made by the experiment subjects. As the plots show, the subjects are significantly more likely than chance to report a total sum higher than the Expected Value of 140.

While the research seems promising, a subject pool of 82 is too small to allow robust and reliable conclusions. Two other sessions are planned for March 2019 to expand the pool of subjects, to at least 250 participants. Therefore, by the time of the conference, the definite results will be available.

“Reversing the order of modeling human behavior”
Monday 15:30 (SUITE 679).

*Shabnam Mousavi (Max Planck Institute) with Shyam Sunder.*

Abstract:

Idea: In virtually every fashion of academic training and school of thought, animal action is intertwined with a manner of intention, purpose, teleology, or goal – deliberate or otherwise. So much so that when operation research and game theory were used as tools and framework for decision theory, the main effort has been on justifying the use of optimization techniques for axiomatizing reasonable human behavior. Never before, to the best of our knowledge, the goal has been set to explore just how much we can understand of human behavior independent of reason and intention, where there is no need to justify the use of optimization. Putting the physical existence of humans in the core, we attempt to reverse the customary order in the practice of modeling human behavior. In particular, we adopt from physics the principle of least action, and show that it can explain a great deal of what humans do without including biological or socio-psychological attributes.

A wide range of actions is configured in Table 1 within the limits of physical properties only. A configuration of actions in terms of two types of elements (in columns 2 and 3) is given for increasingly more complex actions (in the rows), with associated paths of minimum action. Row 1 configures the simplest case of physically moving from point A to point B, where the exogenous elements are these very points, the action element is Euclidian distance, and the resulting path is a straight line which minimizes the distance. Row 2 provides a decomposition of Figure 1 phenomena, captured in the Snell’s law, as a special case of the more general principle of least action. Here, the action element which is minimized is time, not distance and time constitutes the fourth dimension—referred to as the Minkowski space. Row 3 is where the creative execution of our idea for using physics to describe behaviour truly starts. The action element here is not a new dimension per se, rather a fixed physical item, namely an angle. The exogenous element meanwhile is akin to the
previous row’s physical dimensions. Notably, although a biological notion can be detected in the case of Gaze Heuristic, under the “action element” column, this proposed configuration only requires the fixed angle of gaze, a physical element, and not the evolutionary capacity of gaze that lies in the biological brain. The last row, is so far, the furthest we were able to push our structure. It involves problem-solving behaviour viewed as an act of moving from the problematic beginning to a resolved end. The external requirements or non-action elements are specific structures in the task environment that allow for the use of certain solutions. The action element, on which the economizing is operated is the top one (or two) que, or a very simple (heuristic) model that is used to solve the problem. Although this action level represents the regular problem-solving behaviour, a better way to follow the way in which it fits in the structure conforming to the principle of least action is to think about scientific inquiry, where for instance, the case of one-reason decision making can be represented by using a non-compensatory series of weights. Notice that this series can be viewed conceptually as representing a path.

Remark: What we outlined here is only one part of one branch of a grand theory of action. A branch of a theory can be considered as a lens through which the subject matter is investigated. The presentation will provide more elaborations.
“How good are choice heuristics?”

Monday 15:30 (SUITE 686).

Eduard Brandstätter (Johannes Kepler University Linz).

Abstract:

Aim

Previous research (Payne, Bettman, & Johnson, 1993; Thorngate, 1980) investigated the efficiency of various choice heuristics in comparison to expected value theory. In these computer simulations decision strategies were applied to error free data, characterized by full outcome and probability information. In this talk I argue that heuristics were not designed for error free, artificial environments, but for realistic ones, which are characterized by noisy data and incomplete information. The aim of this research, thus, is to test the efficiency of risky choice heuristics in comparison to expected utility theory in environments with noisy data.

Method

For the computer simulations we implemented different choice environments, which were created by combining different levels of noise with different monetary outcome and probability distributions. Choices were made between two, three, or six gambles, with each gamble having the same number of outcomes (either 2, 6, or 8). Each environment contained 2.000 different decision problems, in which the following six decision strategies: expected value theory, expected utility (EU) theory the equiprobable, lexicographic, minimax, and probable heuristic, made 50 choices per decision problem.

Noise was normally distributed (M = 0), and the level of noise was manipulated by using different degrees of noise variance. This noise was added to (a) probabilities, (b) monetary outcomes, or (c) both. These manipulations allowed for investigating the separate and joint effects of noise on the efficacy of above-mentioned decision strategies.

Results

For choices between three gambles, each one having three outcomes, the performance of the equiprobable was much better than that of EU theory, when error was added to monetary outcomes and to probabilities. This heuristic assumes equal probabilities for all monetary outcomes (i.e., 0.5 for a two-outcome gamble; 0.33 for a three-outcome gamble, and so on). All in all, across the environments we investigated heuristics performed surprisingly well and outperformed the gold standard of expected utility theory in specific, theoretically predicted conditions.

Conclusion

Previously, heuristics have been tested under unrealistic assumptions (complete probability and outcome information). Given realistic assumptions (incomplete information), we find that all heuristics performed much better. The bias-variance-dilemma, further, theoretically predicts that a heuristic might be better suited for choosing the gamble with the higher expected utility than the expected utility model. Together these considerations suggest that heuristics might not be chosen because of cognitive limitations or effort-minimiziation, but because they are actually better.
“What experimental economics has contributed to behavioral economics: A view from 20 top papers in experimental economics”

Mark Pingle (University of Nevada, Reno).

Abstract:
Experimental economics and behavioural economics have each developed as fields within the broader economics discipline, and the two have complemented each other. Behavioural economics has provided theories that explain economic phenomena better by relaxing traditional behavioural economic assumptions. Experimental economics has provided tools for testing behavioural theories. This presentation and draft paper will identify behavioural theories tested and experimental methodologies employed in 20 top papers in experimental economics. Those attending the presentation or reading the draft paper should obtain insight regarding how the behavioral economics approach has transformed our thinking about some fundamental economic issues and insight regarding how experimental economics has helped identify the fundamental causes of interesting economic phenomena.

“Misunderstandings and misinterpretations of economist, business school academicians, business practitioners, and graduate students about hypothesis testing”

Reza Kheirandish (Clayton State University) with Uwe Czienskowski, Shabnam Mousavi.

Abstract:
Statistical analysis is one of the main tools for many empirical studies. In statistics, the Hypothesis Testing is one of the essential tools that have been used in many different disciplines, including Economics, Marketing, Management, Psychology, to name a few. But despite its popularity among researchers, Hypothesis Testing is a very controversial and misunderstood topic, maybe now more so than ever, and even thoughtful and intelligent statisticians and researchers have major disagreements about the value of Hypothesis Testing. The classical Hypothesis Testing framework has been criticized since the late 1920s, especially by Bayesians. Since early twentieth century, there has been heated debates between Fisher and Neyman–Pearson and some statisticians simply dislike p-values altogether. Even philosophers have published many articles on what Hypothesis Testing is really doing (for example see Deborah Mayo). There has been a series of studies on the level of understanding of Hypothesis Testing, its assumptions, and the interpretation of p-values and test results. Refer to Gerd Gigerenzer, 2018, for an excellent survey of research in this area, see Ioannidis, 2005, for the potential problem with research findings assessed by formal statistical significance, and look at Ziliak and McCloskey, 2004, for a research on mixing up economic and statistical significance in a leading economic journal.

In this paper, we want to investigate to what extent these survey results are replicable. We also want to see whether the general understanding of the “trained professionals” and/or the graduate students about Hypothesis Testing are as bad as depicted in some of these previous studies or not? We provide our case, which involves a ritual of performing statistical Null Hypothesis Testing that
requires close scrutiny and we believe it can shed light on the recent concerns with the lack of scientific transparency and replication crisis.

We present the results of our pilot study on Hypothesis Testing literacy among academics and practitioners who were participants in four different business and economics conferences and compare them to the previous results in the literature. Using a survey of twenty True or False questions (we have also added “Don’t Know” and “Ambiguous/Undecidable” to the possible responses), we have asked participants to test their understanding of the Hypothesis Testing, with absolutely no deception (full transparency about the intent of the study) and voluntary participation in answering the survey which biases the results positively: Only those who are more comfortable with the topic and confident about their knowledge of the subject matter will participate. We also look at the differences between economists and other business professionals. The results of the pilot study are alarming, to say the least and show a deep misunderstanding about this statistical tool both among economist and other business professionals even in our positively biased sample which suggest an even more pronounced problem in an unbiased sample. For future research, we plan to collect more data from different conferences and analyse it. In the next phase of this research, we also plan to point out ways to improve the statistical practices in social sciences and business schools and provide suggestions for a smooth introduction of elements into the curricula and textbooks that rectify the presented shortcomings.

“The Two Beginnings of behavioral Economics”
Monday 15:30 (SUITE 686).

Roger Frantz (San Diego State University).

Abstract:
Behavioural economics is believed to have begun in the 1970’s with Kahneman and Tversky. It is a major contention and purpose of the book to be published by El Sevier in September, 2019, The Beginnings of Behavioural Economics, and the paper I wish to deliver to the 2019 SABE-IAREP conference, that behavioural economics had two beginnings, one in the 1940’s and the other in the mid 1970’s. Kahneman and Tversky represents a major advancement of behavioral economics, but they were not the beginning. I have no problem thinking of Kahneman and Tversky, and Thaler as a beginning of behavioral economics, but not the beginning. My contention is that the two beginnings are Beginning 1 and 1a. How can there be two beginnings? In the case of the history of behavioral economics there are two beginnings because for the most part the Beginners of Beginning 1a have not recognized the Beginners of Beginning 1. So from the point of view of the Beginners of Beginning 1a, the beginning started in the 1970s. Beginning 1 began in the 1940’s with the writings of Katona (or the 1930’s with Hayek). Beginning 1a began in 1974 with Kahneman and Tversky. The pre-Kahneman and Tversky behavioural economists are the first generation or “old” behavioural economists. In 1940 Katona published a book about learning, Organizing and Memorizing: Studies in the Psychology of Learning and Teaching. Learning would become important in behavioural economics. His major work on behavioural economics in the 1950’s was Psychological Analysis of Economic Behaviour (1951). His other major work was in 1975, Psychological Economics. Harvey Leibenstein’s major publications on behavioural economics were in 1950, “Bandwagon, Snob, and Veblen Effects in the Theory of Consumer Demand, and; 1966, “Allocative Efficiency and X-

In this paper I will explain why the Katona-Leibenstein-Simon/etc group were first generation behavioural economists and show that several major topics in behavioural economics were written about by this first group. I will discuss Paul Samuelson concept of the sophisticated-anthropomorphic sin to explain why this first generation group have been ignored by the newer groups. My image of the history of behavioural economics is that of a door. The first group, the “old behavioural economists” built a door and on it placed a sign, “Behavioural Economics, Enter Here.” The second group, the “new” behavioural economists, opened the door. The third group walked into the room, which was on the other side of the door, sat down and continued their research on their ipads and (desk-top and lap-top) computers. By comparison, the first group used typewriters, and not only electric typewriters. The second group followed the third group into the room. The first group couldn’t enter the room because they didn’t know the secret handshake!

Group 2 “giants” of behavioural economists “stood on the shoulders” of Group 1 giants. And Group 3 giants stood on the shoulders of Group 2 giants. Group 1 giants stood on the shoulders of some really old giants. Nothing in the paragraphs above, and nothing in the paragraphs below or chapters to follow are to be interpreted to mean that I deem Richard Thaler’s contributions to (behavioural) economics to be anything other than of the highest order. Add Daniel Kahneman, and Amos Tversky to the previous sentence. Add the names of the new behavioural economists in the third group as well. The point of this book is not to “put down” anyone. It is to point out the contribution to behavioural economics of the first-generation behavioural economists.
Social behaviour 3 (SUITE 688)

“The neglected costs of helping: An experiment on the motives underlying harmful support”
Monday 15:30 (SUITE 688).

Aliciavon Schenk (Goethe University Frankfurt) with Victor Klockmann.

Abstract:
This study analyses helping behaviour in teams with heterogeneous expertise and identifies motives explaining individuals’ tendency to over-help. A laboratory experiment is conducted in which teams of two with aligned incentives repeatedly face real effort tasks. We consider a setting in which it is beneficial to give a hand in the short run, though it causes costs and efficiency losses for the team in the long run, stemming from forgone experiential learning of the supported individual. A priori, team members exogenously differ in task-related expertise. In each round of the experiment, the experienced group member has the possibility to intervene, thereby undertaking his teammate’s task. The treatments exogenously introduce two potential motives for interventions: (i) time constraints, i.e. the time taken by the unexperienced individual is deducted from the time allotted to the experienced one; and (ii) asymmetric information about the speed of learning of the unexperienced team member. Our results clearly demonstrate the relevance of these motives by showing that both treatments significantly increase the propensity to over-help. Thereby, team productivity as well as efficiency net of effort costs are reduced. Differences in patience as well as control and risk preferences emerge as channels through which the treatments operate on an individual level.

“Scapegoating: Experimental evidence”
Monday 15:30 (SUITE 688).

Jana Cahlíková (Max Planck Institute for Tax Law and Public Finance) with Michal Bauer, Julie Chytilová, Gerard Roland, Tomáš Želinský.

Abstract:
Although it is widely acknowledged that violent inter-group conflicts often arise unexpectedly and quickly spread, very little is known empirically about the underlying mechanisms behind contagion of conflicts among masses. In this paper, we study in a controlled experimental environment how natural group boundaries shape the extent and nature of punishment. Most importantly, we explore how group identity shapes willingness to punish innocent individuals for actions of somebody else, a behaviour that we broadly label as scapegoating. Such redirection of punishment can transform localized individual conflict into an indiscriminate group punishment. We develop a novel experimental paradigm and provide the first incentivized test of the existence of scapegoating. Specifically, we explore whether targets of such desire to punish innocent individuals when punishment of wrongdoers is not possible are members of a different ethnic group and why. Further, we provide a clean test of the existence of ethnic bias in terms of punishment of wrongdoers: whether people punish more severely out-group members, as compared to in-group members, for the same misbehaviour.
A rigorous controlled economic test, based on incentivized behaviour, on the existence and prevalence of scapegoating is still lacking. By building on the Third-Party Punishment Game, we develop a new experimental paradigm, Punishing the Scapegoat Game. We add a fourth person, the Scapegoat, in order to separate the person who commits a harm (Wrongdoer) and a person whom the impartial spectator can punish (at own costs) after observing Wrongdoer’s actions. Importantly, we exogenously manipulate information about ethnicity of the innocent person (Scapegoat), to test whether punishment can more easily get redirected against out-group members. Further, we study decision-making of the majority group as well as a minority group and vary information about ethnicity of Wrongdoers and Scapegoats, to separate minority scapegoating and collective punishment. The setting of our study is Eastern Slovakia, a high unemployment region where majority population lives side by side with a disadvantaged and negatively stereotyped minority (Roma) who represent 15% of the local population.

The experiment is designed to shed light on the following open questions: (i) When people cannot punish the wrongdoer, do they tend to punish a “scapegoat” instead, i.e. do they punish innocent individuals? (ii) Are people more inclined to choose as targets of scapegoating the innocent members of an out-group, rather than in-group members? (iii) What are the triggers of scapegoating against innocent out-group members? Is it minority scapegoating, i.e. does it originate in social conflicts within punisher’s own group, by creating a psychological need to blame and harm convenient, weak members of an ethnic minority? Or, is it collective punishment, i.e. does it arise due to social tensions that happen across group boundaries, leading to punishment of out-group members who share a group attribute with the wrongdoer?

The main results are the following. First, in terms of direct punishment of the Wrongdoer, i.e. the individual who makes an active decision whether to harm a Victim or not, we establish that people punish more severely members of the out-group as compared to members of the in-group. The same misbehaviour triggers a magnified revenge towards out-group Wrongdoers and activates discrimination of out-group Wrongdoers. Interestingly, this is not simply because of taste-based discrimination, because when Wrongdoers are peaceful and choose not to destroy resources of the Victim, Punishers do not discriminate against the out-group members. These results are qualitatively similar for the sample of majority as well as Roma minority decision-makers.

Second, we find a clear evidence of the existence of scapegoating, i.e. redirecting punishment to Scapegoats who were completely passive and uninvolved in the wrongdoing. A non-negligible fraction of subjects (25%) do punish Scapegoats for actions of Wrongdoers. Intuitively, the punishing response to misbehaviour is smaller as compared to direct punishment of the Wrongdoer. Importantly, we document a strong group bias in scapegoating among the sample of decision-makers from majority population: the scapegoating is twice as large when the Scapegoat is from the Roma minority, as compared to when the Scapegoat is from the majority group. When Wrongdoers do not harm a Victim, majority punishers do not discriminate against the minority Scapegoats, indicating that scapegoating of minorities is a distinct phenomenon from a plain out-group hate. The observed ethnic bias in scapegoating is specific for the majority population. Roma decision-makers also respond to misbehaviour of Wrongdoers by punishing the Scapegoat, but an ethnic identity of the Scapegoat does not affect their choices.

Third, we show that the magnified tendency to punish the minority Scapegoats is not driven by collective punishment. The minority Scapegoats are punished more for actions of the Wrongdoers.
even when harm is committed by members of the majority group, and thus when Wrongdoers and Scapegoats do not share the same ethnicity.

Together, the results reveal that whenever there is a malevolent harm to Punisher’s in-group member, members of the minority pay a disproportionate price for such misbehaviour. Such behavioural pattern is consistent with the scapegoating hypothesis: when Punishers observe their in-group member unfairly treated, they channel their anger towards members of a weak minority.

“Last word not yet spoken: Last place and rank reversal aversion”
Monday 15:30 (SUITE 688).

Andrea Martinangeli (Max Planck Institute for Tax Law and Public Finance) with Lisa Windsteiger.

Abstract:
Preferences over social ranks have emerged as potential drivers of weaker than expected support for redistributive interventions among those closest to the bottom of the income distribution. We compare preferences for alterations of the income distribution affecting the decision maker’s social rank, but not their income, and compare them with similar alterations leaving both rank and income unchanged. We find support for both a discontinuously greater disutility from occupying the last as opposed to higher ranks, thus affecting only those closest to the bottom of the distribution, and for a general dislike of rank reversals affecting most ranks. We moreover contribute to the replication literature by uncovering and correcting a potential reason for the failed replication of previous results. We discuss implications for policy design in both public finance and management science.

“Pure altruism, warm-glow, and burnout: The case of Japanese nurses”
Monday 15:30 (SUITE 688).

Shusaku Sasaki (Graduate School of Economics, Kyoto University) with Kei Hirai, Fumio Ohtake, Ayako Wakano.

Abstract:
1. Background and Objective
It has been generally believed that nurses should be altruistic. The similar statement is often observed in educational policies in nursing colleges. However, this study clarifies that nurses with pure altruism, one of altruistic preferences, are likely to psychologically burnout. By so doing, this study sheds a light on a negative aspect of nurse’s altruism. A behavioural economics theory (Andreoni 1989, 1990) indicates that purely altruistic nurses will gain their utility from their patients’ pleasure, or vice versa. In contrast, those with warm-glow, one selfish motivation, will gain their utility from their nursing activity itself.

In economics literature, Heyes (2005) theoretically shows that if nurses are altruistic and vocational, they likely supply high-quality labor even under lower wages than market equilibrium. Lagarde and Blaauw (2014) empirically shows that altruistic nurses likely choose jobs in rural areas, where the nurses’ personal and professional lives are difficult. In addition, it can be theoretically predicted that if the number of nurses is insufficient in medical institutions, purely altruistic nurses likely work long hours. These features would be ideal at least for the demand side.
However, some studies in psychology, sociology, and neuroscience indicate that the nurses’ empathetic characteristic, which is a close concept to pure altruism in behavioural economics, predicts psychological burnout (Abendroth et al. 2006; Dill et al. 2016; Omdahl et al. 1999; Tei et al. 2014). Such an end would be undesirable both for the demand and supply sides. In this study, we empirically investigate whether the similar tendency is found when using the indicator of pure altruism in behavioural economics.

2. Methods
We conduct a web questionnaire survey toward 501 samples of nurses, who is currently working at medical institutions in Japan. In the survey, we set hypothetical and experimental questions based on the theory of Lilley and Slonim (2014), identifying a recipient’s type of altruistic preference, which is pure altruism, warm-glow, or no altruism. Also, we set questions for three psychological burnout dimensions, which are emotional exhaustion, depersonalization, and diminished personal accomplishment (Kubo & Tao, 1992; Maslach, C., & Jackson, 1981). We use the survey’s responses and multiple regression analysis, empirically investigating how different the levels of the burnout dimensions are across the nurses’ types of altruistic preferences.

3. Results
The descriptive statistics shows that the proportion of nurses with pure altruism is 27.9%, which is higher than that of ordinary Japanese people with pure altruism (19.0%). On the contrary, the proportion of nurses with warm-glow (52.9%) is lower than that of ordinary Japanese people with warm-glow (65.3%).

The multiple regression analysis shows that the nurses with pure altruism exhibit a higher level of emotional exhaustion, which is one of the three psychological burnout dimensions and an initial symptom of the burnout, than those with no altruism. In addition, they are more likely to regularly use a sleeping, tranquilizer, or antidepressant drug. The similar tendencies are observed in nurses with warm-glow, while the result of pure altruism is more robust than that of warm-glow.

4. Discussion
Based on our empirical evidence and the behavioural economics theory, we discuss that nurses’ mentality with pure altruism is affirmatively correlated with their patients’ one with bad health status, and it determines the nurses’ high level of the emotional exhaustion.

We shed a light on a negative aspect of pure altruism. Our findings can contribute in solving some practical questions: what type of nurse should medical institutions employ? which department should the institutions assign them to? etc. Our findings could further provide feedback to the existing economics theory that when nurses are altruistic and vocational, they likely supply high-quality labour even under the situation that their wage is lower than market equilibrium.
"Illusions of control: The impact of overconfidence on the relationship between fairness, trust, and organizational outcomes”
Monday 15:30 (SUITE 687).

Sarah Bonau (University of Pecs).

Abstract:
We explore the relationship between organizational justice and trust with workplace outcomes. We posit that procedural fairness and interactional fairness foster intraorganizational trust, expressed by high quality of the relationship between managers and employees, which in turn affects workplace performance measures and absenteeism. We explore whether managers’ overconfidence affects the relationship between organizational justice and workplace outcomes (see Figure 1).

The benefits of trusting relationships between employees and managers to the organization are obvious: higher organizational commitment, better job performance (De Cremer et al., 2018; Brown et al., 2015; Dirks & Ferrin, 2001), stronger organizational citizenship behaviour (Colquitt, Scott & LePine, 2007). This study analysis whether the connection between organizational justice and outcomes is affected when managers assess the quality of the relationship with their employees to be better than the employees’ view the manager-employee relationship.

We analysed management and employee data, matched by workplace, of 1.462 workplaces in the UK. Employee responses were aggregated to the organization level. Average level of organizational justice within the workplace was computed based on six measures of interactional fairness, and four variables measuring procedural fairness.

As measure of intraorganizational trust, employees’ assessment the quality of the relationship with their managers, as well as managers’ assessment of the quality of the relationship with employees were used. To test how discrepancies in the perception of the quality of the employee-manager relationship relates to performance measures, the difference between the manager’s assessment and the average of the employees’ responses was calculated. Workplace performance was measured in financial performance, labour productivity, and product or service quality. Absenteeism was reported by managers as percentage of work days lost through employee sickness or absence. While self-reported absenteeism might be influenced by cognitive and social-motivational biases, meta-analysis confirmed its reliability (Johns & Miraglia, 2015). We conducted two-way MANOVA and multiple regression analysis to test the hypothesized model.

The empirical findings show that allowing employees to influence final decisions, and employee satisfaction with involvement in decision-making as measures of procedural fairness are negatively correlated with absenteeism. Of the interactional fairness measures on the employee level, absenteeism was found to be related to managers treating employees fairly and dealing with employees honestly, managers sincerely attempting to understand employees’ views, and understanding employees’ responsibilities outside the workplace. Measuring how the difference in perception of the quality of the relationship between employees and managers relate to workplace outcomes, absenteeism was not found to be related. Absenteeism also was not related to the assessment of the relationship from either the managers’ or the employees’ perspective.
Beyond confirming the relationship between measures of personal trust and workplace performance, the findings also show a relationship between employee involvement in decision-making and workplace performance. The difference in the perception of the employee-manager relationship was found to be related to financial performance, labour productivity, and quality of the product or service. The more the employees’ assessed the relationship better than the managers did, the lower the workplace performance. If the managers assessed the relationship to be better than the employees assessed it, the workplace performance compared more favourably to industry standards. This study contributes to the understanding of leadership trust and employee trust, organizational fairness, and outcomes.

As potential limitation to this study, trust might be an endogenous factor, i.e. good performance could increase employee trust. Brown and colleagues (2015) have addressed this potential criticism, and found marginal effects of employee trust on firm performance measures. Workplace performance measures were derived from responses by the management representatives, hence could be subject to biases. Since the key explanatory variables are derived from employee level response, this issue is mitigated.

To lower absenteeism, organizations should work towards higher levels of procedural fairness, particularly employees’ satisfaction with involvement in the decision-making process. The results show that seeking the views of the employees is not enough. According to our findings, employees need to feel that they are not only being heard, but that they have a role in the decision-making process. This is an important distinction to make for managers. It is important to note here that we found no correlation between the quality of the employee-manager relationship and absenteeism. A good relationship with management does not seem to lower employee absenteeism. Of the factors being tested in this study, employees’ perception of being treated fairly by managers showed the strongest connection to absenteeism. Hence, employees who feel treated fairly by their managers are less absent. The difference in perception of the employee-manager relationship was found to be influenced most strongly by interactional fairness measures. The less employees felt treated fairly and honestly by their managers, the more they evaluated the manager-employee relationship to be of lower quality than their managers assessed it to be. This shows how managers’ misperception of the relationship with employees impacts organizational outcomes.

“Do men and women negotiate differently in the absence of potential discrimination or social costs?”
Monday 15:30 (SUITE 687).

Jenny Save-Soderbergh (Stockholm University, The Swedish Institute of Social Research) with Christine Alamaa.

Abstract:
Despite a broad convergence in labour force participation, education, working hours, occupations and hours of household work (Goldin 2014; Blau and Kahn 2017), a large body of literature provides evidence of gender differences in the economic outcomes of males and females, particularly in the labour market. Recent proceedings in both labour and behavioural economics have given insights to the role of negotiation behaviour in explaining some of these gender gaps in labour market
outcomes (see overviews in e.g. Bertrand 2011; Bowles 2013, Mazei et al. 2015), especially the gender pay gap at the top of the pay distribution. However, less is known on the mechanisms as to how and why negotiation behaviour, conditional on being in a negotiation, differs by gender, and therefore what can be done to close the gender gap.

In this paper, we explore the gender gap in negotiation behaviour by using a novel design of a wage negotiation experiment. The negotiation appears in two contexts where applicants both negotiate over a pecuniary reward (as common in laboratory settings) and for a real job. The most essential part of the design can in short be described as: after being randomly assigned a group of 5 and solving a 2-minute task (either adding numbers or finding words from 3 letter combinations), the participant submits a salary request for a job or for the pecuniary reward, knowing that the one who wins is the participant who requested the lowest salary per correctly solved task. Subjects will thus win the reward or will get the job offer, with the stated salary, given that they requested the most productive efficient wage for the employer.

The design of the experiment is thus created to capture not only the feature that a profit-maximizing firm should hire the most productive worker relative to the requested salary, but also to portray the mirror image that when a job applicant submits a salary request he/she is trading-off the wage level and the probability of getting the job, which decreases with the requested salary relative to other applicants’ salary requests, and increases in his/her productivity. The design further captures the feature that applicants are uncertain about productivity and salary requests of other applicants when submitting their wage offer. Furthermore, the design that only one of the participants (in each group of five) gets his/her salary request imitates the real-life situation that typically only one applicant gets the job while the others are not hired (for a theoretical paper analysing salary requests under uncertainty see Kim and Kircher, 2012).

More important for assessing the gender gap in negotiation behaviour, this experiment aims to assess the gender gap in a context in which neither fear of discrimination nor fear of violating gender-stereotypical norms of appropriate behaviour can play a role. Nor would the influence of stigma or reputation. The design thus aims to capture gender gaps that are isolated from the influence of external factors that could affect gender gaps (see e.g. Bowles, Babcock and Lai 2007; Amantullah and Tinsley 2013) in order to focus only on whether men and women negotiate differently and if so, why.

Our design instead explores the role of beliefs, confidence and risk-taking in explaining differences in negotiation behaviour in a negotiation. Previous experimental research has shown that these mechanisms are important in explaining e.g. gender gaps in competitive preferences and competitive behaviour (see e.g. Dreber et al. 2015, Dreber et al. 2014; Khachatryan et al. 2015; Charness and Gneezy, 2012, Niederle and Vesterlund 2007). Another explanation we explore is how beliefs on others’ negotiation behaviour matter, a mechanism not shown by previous research.

The experiment was conducted as a class-room experiment between March 2013 and April 2014. The experiment sessions, 32 in total, all took place at Stockholm University, which included 276 participants from different courses.

Preliminary results suggest that men and women negotiate differently. We find statistically significant gender gaps in both context; however, controlling for beliefs on relative performance, beliefs on others’ negotiation behaviour, and risk-taking, women ask for more than men in the
negotiation for a pecuniary reward, while they ask for less than men do when they negotiate for the job. Future research will explore explanations to these differences like overconfidence, overplacement, context dependence and gender-group compositions of competitors, while also exploring various robustness issues.

In all, negotiations, and consequentially negotiation behaviour, are important elements of salary determination today, especially among those in the high end of the salary distribution. Negotiation behaviour plays a role also in gaining access to resources within a workplace, or to a promotion. Therefore, if females, compared to males, negotiate differently in a negotiation over e.g. a task assignment, their advancement or similar issues at work or home, gender inequalities are likely to grow. Males would then advance faster compared to females and become overrepresented in the more prestigious positions and thus reinforce a glass ceiling. By the same token, if females attain less following poorer negotiation skills, they may end up in less challenging jobs and use their competence less efficiently. A poor negotiation outcome as a result of worse negotiation behaviour may thus translate into different long-term economic consequences by gender.

“Inequality, social distance, and giving”  
*Monday 15:30 (SUITE 687).*

*Enda Hargaden (University of Tennessee, Knoxville) with Nic Duquette.*

Abstract:
Standard theories predict that greater inequality will increase charitable giving, though tax return data suggest the opposite may be true. We develop a model which, incorporating insights from behavioural economics and social psychology, predicts when greater inequality will lower charitable giving. We test the theory in an experiment on donations to a real-world charity. By randomizing the income distribution, we identify the effect of inequality on giving behaviour. Consistent with our model, heightened inequality causes giving to fall. Policy agendas that rely on charitable giving and other voluntary, prosocial behaviours to mitigate income and wealth inequality are likely to fail.

“Social representations of the sharing economy - An analysis of representative surveys of German and British consumers”  
*Monday 15:30 (SUITE 687).*

*Barbara Hartl (Vienne University of Economics and Business; Danube University Krems) with Eva Hofmann, Sarah Marth, Thomas Sabitzer.*

Abstract:
The term “sharing economy” is often used in academia to describe a variety of consumer activities that provide consumers with access to goods, mostly without the higher costs and responsibilities which usually accompany ownership. The sharing economy covers a range of transactions in almost all business areas, including accommodation, garden area (e.g., community gardens), traffic (e.g., ride sharing), and entertainment (e.g., file sharing). Further, several different business models are associated with the sharing economy ranging from business-to-consumer models (e.g., car sharing organized by an enterprise), over peer-to-peer exchanges by individuals who provide the sharing
good via an internet platform (e.g., couch surfing, i.e., staying overnight at a stranger’s house, organized over a website) to consumption within self-regulating communities without a distinct authority (e.g., community gardens). Within this maze of concepts, it is difficult to discern where actual sharing ends and commerce begins. The definition is still not clear-cut, but new organizations, most important peer-to-peer platforms, such as AirBnB and Uber, have emerged and operate under the umbrella-term “sharing economy”. While for some researchers the sharing economy includes such forms similar to renting, others stress that these models of renting should be called ‘pseudo-sharing’, not being part of the sharing economy. The consumers’ perception on the sharing economy, i.e., their social representation of the sharing economy, as such has not been introduced to this discussion. Social representations can be described as systems of values, ideas or knowledge shared by a social group or society regarding phenomena relevant for the social group. To assess social representations, the free association task is a common approach. Participants are presented with a certain stimulus and are asked to write down associations that spontaneously come to their mind. A systematic analysis of how the sharing economy is perceived by consumers themselves is currently missing from the literature. The objective of this paper is to explore whether consumers are familiar with the term “sharing economy”, how the sharing economy is socially represented and how consumers distinct it from the traditional economy.

Based on a representative survey of German consumers (N = 609) and British consumers (N = 623), the current paper shows that the majority of consumers are not familiar with the term “Sharing economy” (Germany: 76.7%, Great Britain: 79.3%). Further analyses revealed that the probability of knowing the term “sharing economy” depends on the sex, age, residence, income and risk-seeking behaviour of the participants. However, consumers who are not familiar with the term sharing economy also report the usage of platforms, such as AirBnB, BlaBlaCar or Uber, usually associated with the sharing economy in academic research. Those who knew the term “sharing economy” were asked to write down what comes to their mind when thinking about the sharing economy (free associations) and evaluate their associations as positive, neutral or negative. Free associations were analyzed with core-periphery analysis to identify core and peripheral elements of social representations. Core elements are stable and resistant to change, whereas peripheral elements constitute of terms that are more loosely associated with the object and therefore less stable. The analysis revealed that “sharing” and “carsharing” are important associations in Germany, whereas no clear core can be defined in Great Britain. Both German and British consumers evaluate the sharing economy as very positive. When asked about their perception of the difference between the traditional economy and the sharing economy (open question), most of the consumers mention the importance of sharing resources in contrast to renting out resources, profit orientation, and commercialization as distinction criteria.

The current results show that aside from the academic debate over a clear definition of the sharing economy, certain groups of consumers are not familiar with the term, although they use sharing offers. Further, the positive evaluation of the sharing economy somehow contradicts the actual academic debate on the downsides of the sharing economy, such as digital discrimination and the exploitation of consumers rather than their empowerment.
PARALLEL SESSION 4 (TUESDAY 11:00)

Environment 2 (HOGAN 1)

“Eliciting attitudes to water services and costs in Scotland: An experimental study”

Tuesday 11:00 (HOGAN 1).

Cameron Belton (Economic and Social Research Institute) with Ciarán Lavin, Pete Lunn, Deirdre Robertson.

Abstract:
Any organisation that seeks to represent the views of the citizenry faces the problem of how it can ascertain, truthfully and accurately, what those views are. We report the results of two studies, in collaboration with the Scottish water regulator and the OECD, that utilise behavioural science and experimental methodology to inform the ongoing regulatory processes of the water industry in Scotland, by eliciting the attitudes of Scottish citizens regarding their water service provision.

Specifically, the studies ask two questions: 1) how does the provision and presentation of future price change information influence citizens’ acceptance of price changes over short and medium time horizons (1 - 6 years), and 2) how does information about the costs and timings of different water service improvements affect citizens’ prioritisation of these improvements? Each study was conducted using a different representative sample of Scottish citizens (n= 600 and n= 599, respectively), and were both conducted across two platforms, online and face-to-face. Evidence of systematic differences in responses across platforms raises potential methodological questions as to the reliance of responses across experimental platform types.

In the first study, participants were asked to rate different price trajectories (patterns of price rises) for their water charges over a 6-year period. The trajectory pattern, presentation and magnitude of price rises were manipulated within-subject. The provision of additional cost information (designed to simplify the calculations of future costs) was also manipulated both within- and between-subject. The results from this study suggest that Scottish citizens are generally accepting of price rises in the short and medium terms. There is a clear preference for more immediate price rises over delayed rises. In addition, the provision of additional cost information significantly influenced attitudes to different price trajectories, suggesting that citizens do not always accurately integrate sequential price rises over time.

In the second study, we investigated how citizens in Scotland trade-off water charges with specific improvements to service. Whilst the first study considered price changes without consideration of what might be achieved with any additional investment, in this study we explicitly forced a trade-off between costs and potential improvements to the water service in Scotland. We elicited participants’ priorities for investment in different potential service improvements. To do this we introduced a novel ‘slider task’ methodology, which forced participants to explicitly consider the trade-offs required to allocate limited resources across multiple possible improvements. The provision of additional cost and timing information (i.e. how much a specific improvement would cost and how soon a specific improvement could be made) was manipulated both within- and between-subject. The results from the second study suggests that citizens are increasingly accepting
of price rises when given specific information about the types of improvements that additional investment might go towards. The results also suggest that citizens’ priorities of which specific improvements to invest in are not sensitive to the specific costs of different improvements but are sensitive to the lengths of time improvements take to be made.

The results of these studies are intended to inform the ongoing regulatory process of the water industry in Scotland. Together the studies have shown a high degree of responsiveness of citizens to relevant additional information relating to their water service and costs, as observed through systematic behaviour change throughout these studies. This research highlights the potential role of behavioural science in public policy more generally, and specifically demonstrates the value of the application of rigorous experimental methodology to feed in to regulatory processes.

“The role of preferences for pro-environmental behaviour amongst urban middle class households in Peru”
Tuesday 11:00 (HOGAN 1).

Hanna Fuhrmann (German Development Institute / Deutsches Institut fur Entwicklungspolitik (DIE) and University of East Anglia (UEA)).

Abstract:
Research has shown that individual preferences are important predictors for decision-making in many domains, e.g. regarding health, education, savings or pro-sociality (Dohmen et al., 2011; Falk et al., 2015). My interest lies in the interplay of preferences and pro-environmental behaviour (PEB). In particular, I analyse in how far preferences on risk, ambiguity, time, trust, altruism and reciprocity influence PEB at the household level in Peru. PEB features a number of characteristics, based on which I develop the following hypotheses why these preferences should be important factors in the decision-making process:

- Risk preferences: Many decisions with regards to PEB generate uncertain benefits. This can be due to several reasons, e.g. changes in energy requirements, variations in energy prices or the adoption of new technologies. Therefore, differences in risk and ambiguity aversion should be important for PEB, assuming that people incorporate these uncertainties in their decision-making process.
- Time preferences: PEB is often associated with present costs and future benefits. For example, investing in energy-efficient (and usually more expensive) technologies or renovating your home for better insulation requires upfront investments that will only (financially) pay off after a certain time period in the future. Thus, individual time preferences, i.e. differences in the level of patience and discounting, should influence decision-making on PEB.
- Social preferences: Many PEBs are not observed by others, such as reducing residential energy or water consumption. This gives rise to free-riding and creates collective action problems. Therefore, differences in the level of trust, altruism and reciprocity should be important factors for PEB, assuming that people make their decisions despite being sure that others will do so as well.
Understanding these links is very important as it can generate important implications for policies aiming at encouraging sustainable consumption. So far, there is no clear evidence on the relationship of preferences and PEB, although a number of previous studies have contributed to answer this question (e.g. Carattini et al., 2015; Fischbacher et al., 2015; Fuerst and Singh, 2018; Newell and Siikamäki, 2015; Qiu et al., 2014 or Volland, 2017). Following this literature, there seems to be distinct evidence that preferences play a crucial role for PEB, yet I identify three main flaws in previous research that I want to address:

1. The studies so far only provide partial insights for one or a few preferences in isolation, even though research has shown that it is important to look at preferences together due to correlations.
2. The measures used to elicit preferences differ from study to study, making it difficult to draw generalized conclusions.
3. The vast majority of research on preferences and PEB stems from developed countries, while hardly any evidence exists for this relationship in a developing country context.

I seek to contribute to a better understanding of the relevance of preferences for PEB by addressing these points in the following way:

1. I investigate risk, time and social preferences together and not only focus on one preference in isolation, which allows for more detailed analyses.
2. I elicit data on preferences using the Global Preference Survey (GPS) of Falk et al. (2016; 2018), thus employing a validated methodology that allows for simple comparison within and between countries and further provides a basis for replication in future research.
3. I analyse preferences amongst middle class households in Peru, thereby providing insights on preferences and PEB in a developing country of which not much knowledge exists so far.

Moreover, I advance previous research by shedding light on preferences and PEB in the form of habitual energy saving behaviour at the household level. Most research so far either looks at PEB as a one-time decision, e.g. buying a new appliance or renovating the house, or as energy consumption over a certain period. However, less is known about preferences and their importance for regular PEB in the household, such as switching off lights or turning off the TV. I therefore provide insights on a new dependent variable that has not yet been studied in relation with preferences.

To elicit information on the variables of interest, I have conducted a household survey with 900 middle class households in Lima, Peru, in November/December 2018. In addition to obtaining data on risk, time and social preferences using the GPS, I analyse preferences on ambiguity (which is not included in the GPS). There is a growing stream of literature in uncertainty research that claims that ambiguity might be even more relevant for PEB than risk, since many consequences of PEB are unknown instead of risky. Not much evidence exists in how far risk vs. ambiguity preferences differ in their impact on PEB and I seek to shed more light on this relationship. For my main dependent variable, I build an index for PEB using principal component analysis based on a number of questions targeting habitual energy saving behaviour at the household level. Moreover, I look at habitual recycling behaviour, the relevance of energy efficiency for purchase decisions of new appliances and self-reported data on energy consumption. As potential intermediary variables, I further elicit data on environmental knowledge and environmental concern, which should be relevant for PEB and
might thus mediate the relation between preferences and PEB. My data set is further enriched by extensive demographics that provide several important control variables.

With my analyses, I seek to provide a detailed picture of individual preferences amongst the urban middle class in Peru. Descriptive analyses will focus on general levels of risk and ambiguity aversion, patience, trust, altruism and reciprocity as well as on differences by age, gender, level of education and wealth. The same descriptive statistics will be provided for the dependent variables. Further, I test whether preferences are correlated with each other as previous research has indicated. Moreover, I perform a cluster analysis on preferences, aiming at identifying certain groups of preferences that tend to appear together. The main focus of the analysis will then be on the relation of preferences and PEB, which will be tested in a multiple regression model. My results are important for understanding potential motivations and barriers for PEB particularly in a developing country context. Implications can be used by policy makers to design more efficient policies and programmes for sustainable consumption choices.

“Framed messages to promote preferences for energy efficient air conditioners - A discrete choice experiment in Ghana and Philippines”

Monday 11:00 (HOGAN 1).

Sascha Kuhn (German Development Institute) with Florian Kutzner, John Thøgersen.

Abstract:
With an increase of weather extremes due to climate change alongside with a growing middle class, the demand for space cooling is expected to grow briskly in countries such as Ghana and the Philippines. To decelerate the vicious circle of air conditioners being a contributor but also a way to cope with climate change, it is essential to encourage households to prefer devices with the least impact on the climate. To study how framed messages can promote preferences for energy efficient air conditioners, 876 households in Ghana and 801 in the Philippines were asked to indicate their preferences in a discrete choice experiment (DCE). The DCE was part of a larger household survey and consisted of 12 dichotomous choice sets of air conditioners with three varying product attributes: price, cooling refrigerant & energy efficiency rating. The framed messages were randomly allocated and highlighted reasons to prefer more energy efficient air conditioners (e.g. environmental, utilitarian or social). The study revealed a general preference for energy efficient air conditioners. Framed messages that highlighted utilitarian or social reasons made respondents in Ghana more likely to choose energy efficient devices, whereas framed messages that highlighted environmental reasons made respondents in the Philippines more likely to choose energy efficient devices. The findings suggest that highlighting certain reasons to consume environmentally friendly products can be an effective means to promote sustainable consumer choices across a wide range of national and cultural contexts.
As development has brought households in developing countries closer to durables of their liking, ensuring the adoption of energy-efficient technologies is critical for sustainable energy consumption. However, market and behavioural failures often imply that agents under-invest in energy-saving technologies. Behavioural failures may stem from low levels of energy-related financial literacy of households, which is the combination of energy knowledge and cognitive abilities needed in order for agents to take sound decisions with respect to their investments. The dual objective of this paper is to evaluate the levels, as well as the determinants of energy-related financial literacy in Nepal, and to analyse whether it has an effect on attitudes towards replacement of inefficient technologies. Using novel survey data of about 2000 urban households in the Terai region of Nepal, we find that respondents have low levels of energy-related financial literacy. Although attributes like gender, education, age and income are found to be important determinants, they do not necessarily play a role in the same direction as they usually do for developed countries. This brings to light that a policy prescription that targets specific groups or clusters of the population, may not fit both developed country and developing country contexts identically. What is perhaps more interesting is the observation that higher levels of energy-related financial literacy, especially stronger computational abilities, help overcome the irrationality and bounded rationality of consumers and lead to more rational attitudes towards replacement of old and inefficient household appliances. This is particularly relevant to policy-makers looking to address behavioural reasons for the energy-efficiency gap in developing countries.
Finance 4 (HOGAN 2)

“Effect of competition on the disclosure of verifiable information”
Tuesday 11:00 (HOGAN 2).

Jesal Sheth (University of Nottingham).

Abstract:
The unravelling prediction of the disclosure theory relies on the idea that market forces lead all firms (information senders) to disclose information through a process of unravelling. This requires that consumers (information receivers) hold correct beliefs and, in equilibrium, treat all non-disclosed information with extreme scepticism. Previous research finds that receivers are insufficiently sceptical, or in other words are naive, about non-disclosed information, which leads to the failure of unravelling. This paper experimentally examines whether introducing competition between senders when receivers strongly prefer disclosed over non-disclosed information increases the amount of information that is disclosed when there is a conflict of interest between senders and receivers. We further examine whether naivety about hidden information among receivers decreases with competition between senders. We find that in the absence of competition, complete unravelling fails to occur. However, when senders compete with at least one other sender, we find that there is significantly higher unravelling such that it increases receivers’ overall welfare. Interestingly, receivers’ welfare increases despite no significant difference in their guesses or their beliefs about the quality of the non-disclosed information relative to the treatment without sender competition. In general, we conclude that despite the presence of naivety about hidden information among receivers, competition between senders increases disclosure of information and welfare of receivers.

“Monetary incentives, voting and performance”
Tuesday 11:00 (HOGAN 2).

Ginevra Marandola (Joint Research Centre European Commission) with Luca Savorelly.

Abstract:
This study looks at the effect of monetary incentives on effort when subjects can vote for the type of compensation schemes they prefer. The economics literature has shown that democratically chosen incentives have stronger impact than imposed incentives in strategic games (e.g. Dal Bo et al. 2010). However, few studies have focused on the effect of voting on productivity in the workplace: in the laboratory, Mellizo et al. (2014) find a positive effect of democracy on productivity in a real-effort experiment; by contrast, Dal Bó et al. (2015) find no significant effect of democracy on productivity and real-effort; Savorelli et al. (2016) show in natural field experiment significant a significant negative effect on quality after introducing new non-monetary recognition schemes top-down (vs. letting the workers vote for them). We contribute to this literature about the effects of voting on performance by designing an original “field-in-the-lab” experiment, where subject perform a real data-entry job for sixty minutes, but in a controlled laboratory environment. We vary our design over two main dimensions: the type of monetary compensation scheme (piece-rate vs flat); and the possibility of voting for the compensation scheme employed by the experimenters. We recruit 242
subjects and run three different treatments: in the first (“random flat”), subjects are paid a flat hourly rate; in the second, a piece-rate based on the number of entries, but not on accuracy (“random piece-rate”); in the third (voting), the computer randomly forms groups of three subjects who can vote for their preferred compensation scheme. In contrast to the existing literature, our first result is that imposing the piece-rate payment has a positive effect on productivity. Under the piece rate subjects are faster and as precise as subjects working under the flat rate. We thus show that monetary incentives on speed do not crowd out non-monetary motivation of performing an accurate job. When subjects vote on compensation schemes, those who end up working under the piece rate are faster, but also less accurate than those working under the flat rate. This result holds independently of the voted option, i.e., both for the voting majority (self-selected subjects who voted for the elected scheme) and the voting minority (those who voted for the other scheme). Our second main result is that, in this context, voting has a negative effect on accuracy when monetary incentives on speed are in place. The ability to vote thus crowds out non-monetary motivation in presence of monetary incentives. We identify an explanation for our findings based on over-justification theory: the perception of oneself as having undertaken an activity in order to obtain some extrinsic goal. Contracting explicitly to engage in an activity for a reward should undermine interest in the activity, or in the part of the activity which is not rewarded. In our context, this effect is present in the voting treatment, as the choice which subjects have to make focuses their attention on the extrinsic goal. The effect holds also on the voting minority. For these subjects, the saliency of the extrinsic goal is still present and the negative effect on non-monetary motivation is also given by a shift of the locus of control. In the random treatment, instead, subjects are not aware of the existence of an alternative compensation scheme, thus, the imposition of the monetary incentive is actually not salient. By contrast, it becomes salient in the voting treatment. Finally, in our design the amount of the flat payment is a reference earning for those who work under the piece rate in the voting treatment. It represents a reference point to overcome in order to be reassured of having made the right choice. This undermines the non-monetary motivation even more, by boosting the focus on the outcome, which only depends on speed.

“Conned by a cashback? Disclosure, nudges and consumer rationality in mortgage choice”

Tuesday 11:00 (HOGAN 2).

Michael King (Trinity College Dublin) with Anuj Singh.

Abstract:

Financial products with a cashback feature typically cost consumers more in the long run, but their popularity is rising in the mortgage and credit markets. Using a nationally representative online sample from Ireland, we find that consumers who are younger, less educated and suffer from present bias are more likely to choose costly cash back mortgages. Through a series of experiments, we provide strong evidence that advanced disclosure improves financial decision making of customers and that negative nudges, or advertising, encourages prospective buyers into more costly mortgages. We also find evidence that consumers who demonstrate limited attention bias choose more expensive cashback mortgages that are financially equivalent at the point of drawdown.
“Evaluating the Welfare of Index Insurance”

Glenn Harrison (Georgia State University) with Jimmy Martinez-Correa, Jia Min Ng and J. Todd Swarthout.

Abstract:

Index insurance was conceived to be a product that would simplify the claim settlement process and make it more objective, reducing transaction costs and moral hazard. These attributes make it attractive in developing countries, where the costs of individual claims assessment would quickly overcome the expected premium revenue. Index insurance is also attractive for risk management of the many effects expected from climate change, if these effects of climate change are correlated with verifiable global indices. However, index insurance also exposes the insured to basis risk, which arises because there can be a mismatch between the index measurement and the actual losses of the insured. It is not easy to predict the direction in which basis risk is going to affect insurance demand, in contrast to the clear and strong predictions for standard indemnity insurance products. One reason is that basis risk adds more outcomes to the insurance purchase lottery, and by itself this can generate complications in evaluation when individuals weight probabilities. In addition, index insurance can be theoretically conceptualized as a situation in which the individual faces compound risk, where one layer of risk corresponds to the potential individual’s loss and the other layer of risk is created by the potential mismatch between the index measurement and the actual loss. Experimental evidence shows that people exhibit preferences for compound risks that are different from preferences exhibited for their actuarially-equivalent counterparts. We study the potential link between index insurance demand, probability weighting, and attitudes towards compound risks. We test the hypothesis that the basis risk of index insurance negatively affects both the demand for the product and the welfare of individuals making take-up decisions. We study the impact of basis risk on insurance take-up and on expected welfare in a laboratory experiment with an insurance frame. We measure the expected welfare of index insurance to individuals while accounting for their risk preferences, and structurally decompose the sources of the welfare effects of index insurance. Our results show that the compound risk in index insurance decreases the welfare of index insurance choices made by individuals. The behavioural inability to process compound risks decreases welfare when there is a compound risk of loss, whereas loss probability, basis risk and premium only impact the welfare of insurance choices when the risk of loss is expressed in its reduced, non-compound form. We also see, yet again, that take-up is not a reliable indicator of welfare.
Increasing cervical screening attendance in Iceland

Tuesday 11:00 (NALLY).

Linda Karlsdóttir (University of Stirling) with Conny Wollbrant.

Abstract:
Introduction and aim of research
The purpose of the research is to improve the uptake of cervical screening in Iceland, using short message service (SMS) text messaging through a randomised controlled trial. The text message reminder is designed to increase motivation to book an appointment for cervical screening. It is based on behaviour change intervention framework and provides an opportunity to perform the desired behaviour (book an appointment) when motivation is increased. Participants can book an appointment as soon as they receive the text reminder. Either by clicking on the clinic’s phone number which is included in the text or click on a link that directs them to the clinic’s booking webpage. As reminder aids, SMS reminders have been proven effective for increasing booking and attendance rate for cervical and breast screening (Eaker et al. 2004; Huf et al. 2017; Uy et al., 2017; Vidal et al., 2014). In addition to adding a text reminder, this study integrates a link to the booking webpage in the text message. This is something that, to the researcher’s knowledge, has never been done before and is believed to serve as a steppingstone for increasing booking rates.

Literature review
Cervical cancer is the fourth most common cancer amongst women worldwide (WHO 2018). It is also one of the most preventable cancers, where regular cervical screening reduces the likelihood of cervical cancer by 90%. A population-based cervical cancer screening program was introduced in Iceland in 1964. The success of the screening programme is determined by participation. With greater attendance, more pre-cancerous cell changes are detected, which reduces incidence of cervical cancer and improves quality of life (Eaker et al. 2004; Sabatino et al., 2012). However, the attendance rates have decreased in recent years. From 2013 to 2018, the national attendance dropped from 72% to 66% (The Icelandic Cancer Society 2018). It is highly important to seek measures to improve the attendance rate.

Screening coverage and uptake of cervical screening attendance can vary between socio-demographic groups. Lower attendance rates have been found to occur in groups of younger women (Hansen et al. 2011), and amongst women in lower socio-economic groups (Waller et al. 2009). Other barriers influencing cervical screening attendance are psychological factors such as being nervous about cervical screening and behavioural factors such as finding the right time to go and procrastination (Waller et al. 2012; Östensson 2015).

Researchers have found that behavioural barriers play a stronger role than emotional barriers as predictors of nonattendance (Waller et al. 2009). These findings highlight the need to identify the nature of the decision-making process when women are deciding if they should attend screening. Overcoming behavioural barriers may be the most important factor in maximising uptake in cervical screening attendance. Procrastination is one of the factors that can explain lack of attendance. Even after a decade long delay, women have a comprehensive rationale for postponing cervical cancer screening. With these barriers in mind, researchers are aware of a so-called ‘intention-behaviour
gap’ that is, women are usually in favour of the idea of attending cervical screening, but do not always seem to apply it themselves (Azerkan et al. 2015; Eaker et al. 2004).

Method and design
This research is done in cooperation with The Cancer Detection Clinic (CDC) in Iceland. Invitation letters are sent out every three years and the women are invited to make an appointment for cervical screening. Screening for cervix cancer is offered at the CDC, at local healthcare centres and hospitals around the country and by independent gynaecologists. All cytology examinations for the Icelandic population are done in a laboratory at the CDC. Having one database for all Icelandic population enables this research to include the whole Icelandic screening population.

Participants in the study are all women invited to screening for cervical cancer in Iceland from February to May 2019. These eligible women are 23-65 years old. Besides experimental conditions and participation, the database includes individual information on time since the last smear, when last booked an appointment with CDC, the date of last invitation letter, age and postcode area of residence.

Every month approximately 2200 women all around Iceland get an invitation letter from CDC. Participants in the intervention group will get a text message reminder, 2-5 weeks after receiving the invitation letter. The trial will take four months, giving a sample size of 8800 participants, approximately 80% of these 8800 women will have a registered phone number. Therefore, the final sample size will be around 7000 women. The trial starts in March 2019 and by July 2019 the first data will be analysed on attendance and booking rate.

The design of the text messages is built on behavioural science research on framing and previous research on what kind of text messages has increased uptake of cervical screening. The text messages will include a simple reminder with a question “Have you booked your appointment for a smear test?” and a gain frame message “Regular screening reduces the likelihood of cervical cancer by 90%”. SMS interventions have many benefits over alternative mediums. Firstly, an SMS is cheap, roughly 4p per text whilst a letter is at least 50 times more expensive. Text message is also capable of reaching the recipient wherever they are whilst letters can only be delivered to recipients last known address.

The study has been designed to detect a five-percentage point increase in uptake between the trial groups. To detect this increase in uptake with 80% power at the 5% alpha level, with two-sided testing, 1354 participants per trial arm are required, giving a total sample size of 4062 participants. Since the aim is to compare both the whole population as well as just Reykjavik cohort, sampling will be continued until the required number of participants per group has been reached for Reykjavik cohort. Participants are randomly assigned (1:1:1) to one of the three conditions: A simple reminder SMS-trial, gain-frame SMS-trial and no SMS-trial (control group). See table one for the flowchart.

Findings and conclusion
The primary outcome measure is smear test completed. The attendance rate will be analysed by trial arm before the second reminder letter is sent out from the clinic. The second reminder letter is sent out 3 months after a woman gets her first invitation letter for screening. The comparison of overall uptake between trial arms will be presented using difference in means, ORs and 95% CIs. The trial will evaluate how a text reminder can affect attendance rate and analyse how different content of text reminders influences their effectiveness. Within the intervention groups, participants can get a
text message with a different content to influence their attendance. The message will either include
a gain frame reminder or a simple reminder message from the clinic. Different treatments will be
analysed to see which message has the most effect on increasing attendance rate. The study is
underway, and results will be available at the time of the conference in September.

“Can information about measles help close the vaccination gap? A comparison of two approaches
to deliver relevant information to a target group”
Tuesday 11:00 (NALLY).

Malte Petersen (Federal Chancellery, Germany) with Sabrina Artinger, Susanne Baltes, Christian
Jarchow.

Abstract:
Measles is a highly contagious viral illness that can have serious and even fatal consequences. The
only effective protection against measles is vaccination. If a sufficiently large proportion of the
population is vaccinated, infants and people with weakened immune systems who cannot receive
vaccinations themselves are protected from infection. This phenomenon is known as herd immunity.
Vaccination protection against measles is so effective that it is possible to eradicate the disease.
According to the goal set by the World Health Organization (WHO), measles should be eradicated in
Europe by 2015. In Germany, a sufficient vaccination rate has not yet been achieved. This is evident
from the repeated outbreaks of measles in recent years. In particular there is a significant immunity
gap among adults born after 1970 in Germany. Surveys indicate that this immunity gap is largely due
to a lack of knowledge around measles and the measles vaccination: one in five people mistakenly
believes that measles is not a particularly serious condition; three-quarters of those surveyed were
unaware of the vaccination recommendations for adults.

In the medical world, different approaches are being discussed on how the knowledge and
vaccination gap can be closed. In two studies we have tested how suitable various information
channels are for closing the knowledge and vaccination gap around measles and the measles
vaccination among adults born after 1970. The first study looked at the impact of direct information
to policyholders through various information letters provided by their health insurance company
(Study 1). The direct information via letter aims to ensure that policyholders receive the information
and have the opportunity to read this information in their own time.

The second study looked at the impact of a written request to general practitioners to inform their
patients in a one-to-one conversation about measles and the vaccination recommendations (Study
2). Most patients regard their general practitioner as an expert and important person of trust, and
someone whom they consult particularly frequently on decisions around vaccination. To test the
effectiveness of these two approaches to informing patients, two randomized, controlled field
studies were carried out during the fourth quarter of 2016.

Study 1
Policyholders were provided with information about measles and the measles vaccination directly in
a letter from their health insurance company. Six information letters were tested, all of which varied
in terms of their information density and their graphical content. After the letters had been sent out,
we examined how many of the policyholders written to had been vaccinated against measles in the
three months following receipt of the information letters. As a comparison, the vaccination numbers of a control group which had not received any letters were recorded. With over 100,000 policyholders included in the study, this is one of the world's largest randomized, controlled studies on the subject of vaccine interventions.

By sending the information letters directly to patients, the number of vaccinations was increased by a factor of more than 2.5: compared to the control group, which did not receive any information, in the three months following receipt of the most effective information letter, 8 instead of 3 out of 1,000 patients were vaccinated against measles, with the measure incurring low overall costs. The second most effective information letter led to 7 vaccinations per 1,000 patients during the period under review.

The most effective information letters contained short, easy-to-understand and target group-relevant information on measles and the measles vaccination. In terms of impact, there was no demonstrable difference between a visually simple and visually more striking format.

Study 2

General practitioners (GPs) were asked to inform their patients about measles and the vaccination recommendations in a one-to-one consultation. A portion of the GPs were also asked to put out information brochures in the waiting room or to have them handed out personally at reception when the patient checked in. After the letters were sent, a survey was carried out to determine how many measles vaccinations were invoiced to the health insurance companies by the general practitioners who had been written to in the current quarter. As a comparison, the vaccination numbers of a control group of general practitioners who had not received any letters were recorded. More than 3,000 general practitioners were written to for this randomized, controlled field study.

The results show that a letter to general practitioners with the request to step up targeted information to patients did not have any demonstrable effect on vaccination numbers. This is also true for GP practices that were asked to also put out information material in the waiting room or to hand it over at reception. Compared to the control group, there were slightly higher vaccination numbers among the general practitioners who were written to. These cannot be demonstrably attributed to the letters, however, due to significant regional fluctuations.

The comparison of the two studies indicates that, of the tested measures, only direct information to patients is suited to help close the measles vaccination gap among adults born after 1970. The information provided must be brief, easy to understand and relevant to the target group. The two most effective letters met these criteria and increased the number of measles vaccinations by a factor of more than 2.5. The sending of 1,000 information letters to policyholders can accordingly lead to 5 additional vaccinations in a period of three months. At costs of around EUR 100 to 125 per additional vaccination, this measure is comparatively inexpensive. In contrast, the written request to general practitioners to provide more targeted information to patients regarding to measles and the measles vaccination did not have any demonstrable impact on vaccination numbers.
“Together for safer care”: Designing and testing a program for patient safety and good hand hygiene on ICUs across Germany

Tuesday 11:00 (NALLY).

Sabrina Artinger (Federal Chancellery, Germany) with Susanne Baltes, Petra Gastmeier, Sonja Hansen, Christian Jarchow, Malte Petersen.

Abstract:
Health care-associated infections are the most frequent adverse event in health-care delivery. In developed countries, of every 100 hospitalized patients at any given time, 7 will acquire at least one health care-associated infection, creating significant mortality, additional suffering for patients and their families and substantial financial losses for health systems. For the case of Germany this translates to 400,000 to 600,000 health-care-associated infections and 15,000 deaths per year alone; one third of which is estimated to be preventable.

A central driver of preventing health-care-associated infections is good hand hygiene of medical staff, e.g. doctors and nurses. But while WHO and many member countries have achieved significant improvements of compliance with hand hygiene recommendations for the last two decades, hand hygiene quality still falls short of required levels.

For the last three years, we have been working together with leading hygiene experts, doctors and nursing staff as well as hospitals and policy makers to develop and empirically test a program to address the complex problems that underlie the lack of hand hygiene compliance. The program is called “Together for safer care”. It is multimodal and employs a team and participation-based approach that promotes organizational learning, a good error culture and leads to a cultural change on ICUs. At its core is a monthly team meeting in which doctors, nurses and hygiene specialists of the respective ICU discuss problems in the work processes and jointly develop an optimized workflow that increases patient safety.

Developing the program:
In this presentation, we will give details on the intervention and describe the process of applying evidence from social and behavioural sciences and gathering interdisciplinary expertise as well as first hand insights from medical staff to identify and overcome main obstacles that prevent hand hygiene compliance. We will talk about the process of program design, the pretesting of the intervention with our pilot ICU and the collaboration in an interdisciplinary and multi-professional team.

Testing the program:
“Together for safer care” has been tested in a randomized controlled trial in intensive care units across Germany. The multicentre step-wedged-design includes 80+ hospitals in two cohorts. We will talk about the study design, the delivery of the intervention and technical details of measuring hand hygiene compliance which has been conducted in accordance to WHO standards and in cooperation with the National Reference Centre for Surveillance of Nosocomial Infections.

Results:
The results of the first cohort show a highly significant increase of handy hygiene compliance from 72% to 86%. ICU’s initially experiencing major problems with safe care benefited the most from the program: in this group average hand-hygiene compliance increased from 57% to 84%.
Results from a pilot ward and reactions of ICU teams after the program indicate that these effects might be long-term: the program induces a cultural change, putting patient safe care into a team based discourse and joint responsibility that avoids individual blame and shame logic while fostering organizational learning and empowering everyone in the team to contribute to better work processes.

How to come from scientific evidence and practical experience to effective policies? We would like to conclude by discussing what this example study taught us about the process of behaviourally informed policy design and how we share and use experiences to improve evidence based and behaviourally informed policy making.

“Addressing gaps in information retention and value perception of IFA pills”
Tuesday 11:00 (NALLY).

Anisha Singh (Busara Center for Behavioural Economics) with Pooja Haldea, Sami Horn, Georgina Mburu, Nicholas Owsley, Neela Sadana, Sarah Swanson.

Abstract:
Background
From the fourth month of pregnancy until a child is 6 months old, women are recommended to take the IFA pill everyday day to help increase their energy levels, support baby development and to help ensure a smooth delivery. Although women in rural areas are aware of IFA supplements, persistent gaps in information retention, value perceptions and adherence need to be addressed to increase uptake and usage. Even in regions with constant supply of IFA pills and maternal care counselling from ASHAs and Anganwadi workers, literature suggests that pregnant and lactating women do not adhere to the medication schedule.

Following in-depth qualitative research with pregnant women and health workers, Busara Center for Behavioural Economics (Kenya), in collaboration with the Centre for Social and Behavioural Change at Ashoka (CSBC) (India) identified the key behavioural barriers - adherence, recall, value perception of IFA, perception of side effects and trust in ASHAs to uptake and adherence to IFA pills and designed and tested interventions to address them. Through a series of mobile lab and field experimental studies, we tested out the efficacy of 5 behavioural interventions: 1) counselling cards, 2) food equivalency images, 3) IVR reminders, 4) Testimonial video and 5) daily tracking device (calendar). The study took place June 2018 through February 2019.

Experimental Design
We employed both lab and field experiments to test our selected interventions across a sample of 750 women in Rural Haryana; our sample consisted of women of child-bearing age 18-35 years from more than 60 villages in Haryana. We tested the lab experiments in a mobile lab on a bus that travelled across Rural Haryana to expand our access to women who would otherwise be restricted from participating due to cultural and logistical reasons. All participants were compensated for their time taken to participate in the study.

Results
Before we launched the interventions in the lab and the field, we pre-tested the intervention materials including: preferred doctor’s image for endorsement message and preferred image of
baby for the calendar with women on the ground to inform the final design. Through mobile lab testing, the presentation of counselling cards demonstrated a positive effect of visual information on recall of side effects and coping strategies (~21% treatment vs ~13% control, as in Figure 2). However, including a doctor endorsed graphic to the counselling card had no significant effect on trust. Using images with food equivalency information, we find the images significantly increased the value perception of IFA pills (~34% treatment vs ~26% control) and in a possibly related finding, the images also increased the recall rate of information pertaining to dosage of the pills.

In addition, through a field experiment we found that participants who received a calendar with peel off stickers were more likely to adhere to a proxy behaviour (of giving a miss call to a number daily) than those who did not receive the calendar (64% treatment vs 50% control, as in Figure 1), thus women could benefit from having an interactive tracking mechanism alongside the pills. Lastly, we did not find any significant difference between showing a testimonial video from a pregnant woman versus standard mass media communication on IFA pills.

Results from the counselling card and goal-tracking device seem promising and we validated the two main barriers as perception of side effects, and lack of habit formation as well as our interventions to target them through focus group discussions with ASHA workers post the lab testing.

Discussion

Visual information is more memorable
Even though most women had heard of IFA pills before, participants were more likely to recall the new information about side effects and coping strategies if the information was accompanied by the counselling card. Adding this counselling information along with the card to current health information shared by ASHAs and Anganwadi workers may be effective at disseminating information on coping strategies and therefore increasing overall adherence to the IFA pill. In relation to this, we also captured that counselling information should be kept brief to reduce the risk of information overload.

Daily tracking behaviour can increase adherence
Based on our findings, being able to track a particular behaviour increased the likelihood of adhering to it. Pregnant and lactating women could benefit from receiving a goal tracking device alongside their dosage of pills to help encourage them to take up and adhere to the IFA pill for the recommended time period. It is also important that the daily tracking tool be interactive (for example a peel off or scratch calendar) with some positive reward such as an image of a healthy baby to incentivise its use.

Further Research: Ongoing Field Pilot
As a step toward scaling effective interventions for last mile impact, CSBC, Busara and Clinton Access for Health Initiative (CHAI), have come together to pilot the counselling card and goal tracking interventions in a field randomized controlled experiment setting with pregnant women across two districts in Madhya Pradesh. We use Anganwadi workers as the main channel of delivery for these interventions and test out various treatment conditions (control, counselling card only, goal tracking device only, counselling card + goal tracking device) to understand habit formation and adherence, changes in trust and value of IFA, knowledge and recall of IFA dosage and benefits along with related health behaviours. Results of this pilot will inform scale up decisions as part of the WIFS Anaemia campaign.
**Preferences 1 (DAVIN)**

“*When is the strategy method appropriate? The role of emotions*”

*Tuesday 11:00 (DAVIN).*

_Elena Manzoni (University of Verona) with Giuseppe Attanasi, Pierpaolo Battigalli._

Abstract:
There is a large debate in the experimental literature on the effects of adopting the strategy method instead of having the game played sequentially. The evidence on whether the sequential method of play is equivalent to the simultaneous one is mixed. The seminal work by Brandts and Charness (2011) highlights that the equivalence holds for some games and some experiments but not for others.

We propose a novel rationale to explain this phenomenon and we develop the analysis both theoretically and experimentally. We suggest that the equivalence may or may not hold in relation with the emotions that are at place in the game that is experimentally tested.

Theoretically, we model emotions in games following the approach of psychological game theory (Battigalli and Dufwenberg 2009; Battigalli, Corrao and Dufwenberg 2018).

We follow Battigalli, Corrao and Dufwenberg (2018) in the classification of emotions into mere anticipation vs. mere action tendencies. In the first case all that matters is the anticipation of psychological states (which in turn may depend on anticipatory feelings) while in the polar case experience utility does not depend on beliefs and only affects action tendencies via distortions. Examples of feelings in the category of mere anticipation are expectation-based reference-dependence, anxiety, guilt, intrinsic reputation, and regret avoidance, while in the mere action tendency category we can find frustration & anger. Reciprocity deserves a special mention in that it can be modelled as belonging to the mere anticipation category or to the mere action tendency one. In its most famous version (Dufwenberg and Kirchsteiger 2004) it belongs to this latter category.

Emotions that display mere anticipation can moreover satisfy own-plan in-dependence or not. If they do, all the standard properties of subjective expected utility hold. In particular, preferences are dynamically consistent and randomization is superfluous. Examples of such belief-dependent preferences are guilt, intrinsic reputation and regret avoidance. We show how the dynamic consistency implied by mere anticipation and own plan independence is the key to explain the equivalence between the strategy method and the sequential method of play. This is due to the fact that the strategy method induces covert commitment which may solve potential self-control problems in the presence of dynamic in-consistency thus changing the results with respect to the sequential method of play. We devote a special attention to the issue of reciprocity, to understand whether there are game forms in which it may induce dynamic inconsistency or not.

The second step of the theoretical analysis moves from the observation that different belief-dependent preferences may have a bite in different games. For example, anger cannot play a role in games in which the second mover is not active after choices of the first mover that disappoint him and may generate anger. Therefore we investigate the relation between the characteristics of the specific game form and the emotions that may play a role, to identify which games are more likely to induce the same behaviour across methods of play in the lab.
Finally, we test our predictions experimentally through a battery of standard games played both simultaneously and sequentially. We also elicit first and second order beliefs of players, in order to test whether the equivalence results between methods of play is indeed related to the type of belief-dependent preferences that subjects display in the experiment.

“Plasticity of human strategic sophistication in interactive decision-making”

Tuesday 11:00 (DAVIN).

Sibilla Di Guida (University of Southern Denmark) with Davide Marchiori, Luca Polonio.

Abstract:
Most human decision-making happens in interactive situations, in which the decision outcome for an agent depends upon the decision of one or more other agents. The ability of accurately guessing the other agents’ moves, commonly referred to as strategic reasoning, is therefore fundamental for obtaining better decision outcomes.

The depth of an individual’s strategic reasoning, often summarized as the level of strategic sophistication, has been shown to be stable across different interactive decision situations and strongly associated with stable individual traits such as cognitive ability. This could suggest that the level of strategic sophistication is a stable trait in individuals.

We cast doubts on this statement, testing whether and to what extent experience affects strategic sophistication. In a controlled behavioural lab experiment, we collect and analyse choice and ocular data to evaluate the effect of different kinds of repeated interactive decisions with immediate feedback on the participants’ strategic sophistication.

We show that such repeated experience can dramatically affect participants’ level of strategic sophistication, and that newly acquired strategic sophistication is generalized to cope with different, more complex interactive decisions.

Our results show that strategic sophistication is plastic, with important implications for the development of theoretical economic modelling, cognitive training schemes, and artificial intelligence.

“Child preferences and outcomes: Evidence from rural Bangladesh”

Tuesday 11:00 (DAVIN).


Abstract:
Knowing about determinants of heterogeneity in behaviour and life outcomes is essential for economists and policy makers alike. Thereby, it is widely assumed that non-cognitive skills (also) drive individual decision making among others the set of (economic) preferences such as time, risk, and social preferences which are important elements in economic frameworks. Many researchers have worked on understanding determinants and consequences of differences in non-cognitive skills. So by now, they are known to be key predictors of central life outcomes such as educational
attainment, job performance, earnings, health outcomes and participation in risky behaviours (e.g., Borghans et al., 2016; Bowles, Gintis, and Osborne, 2001; Caspi, Roberts, and Shiner, 2005; Chabris, Laibson, and Morris, 2009; Friese and Schildberg-Hörisch, 2017, 2018; Golsteyn, Grönqvist, and Lindahl, 2013; Gutman and Schoon, 2013; Heckman, Stixrud, and Urzua, 2006; Mott et al., 2011; Sutter et al., 2013).

Yet, most literature has focused on adult decision makers in developed countries. There is not much evidence directly linking child preferences and child outcomes or field behaviour, especially not in a developing country context.

Motivated by this apparent gap, we collect data applying a united experimental framework to measure different types of preferences. Comprising 4,000 households from rural Bangladesh, our data set spans childhood, adolescence and young adulthood, basically covering the whole life period that is potentially critical for the formation of non-cognitive skills. We elicit cognitive and non-cognitive skills of up to four household members using incentivized experiments, well-established scales as well as validated questionnaires and survey items. Besides, the data set contains information on socio-demographics, income, employment, assets and expenditures as well as health, the Strengths and Difficulties Questionnaire (SDQ) as a measure of behavioural difficulties and items regarding parenting style.

With approximately 10 percent of people worldwide living in extreme poverty (2015, World Bank Press Release) and 45 percent living in rural areas (2017, World Bank Data), moving from the much studied and urbanized Western countries to rural areas in the developing world, we gain access to a highly relevant group and can compare whether the (few) established results on the correlations between child preferences and outcomes also hold here.

The households are randomly sampled across four major districts of Bangladesh and data was elicited in 2018 for more than 6,000 children aged 6 to 16 and their parents. At the core was the sequence of three financially incentivized experiments for time, risk and social preferences yielding measures for the degree of patience and time consistency, risk aversion and a typology of other-regarding preferences. The lab-in-the-field experiments took place at the families’ homes following popular experimental protocols already used in similar settings (see, e.g., Bauer, Chytilová, and Morduch, 2012; Bauer, Chytilová, and Pertold-Gebicka, 2014; Binswanger, 1980; Fehr, Bernhard, and Rockenbach, 2008). For the time preferences experiment, children had to choose between smaller, sooner rewards and larger, later rewards in three decision sets. To elicit risk preferences, children had to choose between six different gambles where for each subsequent gamble the expected value increased jointly with the variance. In the social preferences task, children had to make four allocation choices dividing stars between themselves and anonymous children of same gender and roughly the same age.

Results indeed suggest correlations between preferences and multiple outcome measures. We ran OLS regressions for all outcomes plus (ordered) logit and probit models for binary/categorical outcomes variables controlling for an array of socio-demographic characteristics as well as cognitive ability. Risk preferences are predictive of risky behaviours elicited through a range of questions developed for the special cultural context of Bangladesh. Social preferences map into pro-sociality and indicators of behavioural problems in general, as stated by mothers about their children when answering the SDQ. In particular, children being altruistic, egalitarian or selfish contrary to being
spiteful exhibit more prosocial behaviours and have less behavioural problems. Making time consistent choices is correlated with children’s study attitude and a tendency to show less behavioural issues.

No link could be established between time preferences and time-related outcomes as well as between any preference measure and health outcomes such as recent illness or BMI.

Besides providing cutting-edge descriptive evidence, we seek to further refine our understanding of the relationship between preferences and field behaviour by looking at potential channels and mediators. We explore whether the parenting styles that the children have been raised under are related to non-cognitive skills and/or field behaviour as it has been suggested that parenting is associated with both (see, e.g., Cobb-Clark, Salamanca, and Zhu, 2018; Doepke and Zilibotti, 2017).

In assessing the variety and effects of children’s (non-cognitive) skills in a developing country context, we gain knowledge about a vulnerable and policy relevant group that else often remains invisible. We contribute notably to the comprehension of individual decision making and its consequences at a stage sensitive for support.

“Better the devil you don’t know than the devil you know: Ambiguity preference in the negative domain”

Tuesday 11:00 (DAVIN).

Liema Davidovich (Ruppin Academic Center) with Yassour Joseph.

Abstract:
The purpose of this paper is to examine in an experimental setting the attitudes toward ambiguity over probabilities and over outcomes in the positive and negative domains, using a mixed design of within-subjects and between-subjects. Ambiguity refers to uncertain situations where the probability of the possible events is unknown. One can distinguish between two sources of ambiguity: ambiguity over outcomes and ambiguity over probabilities. Ellsberg (1961) has shown that people present aversion to ambiguity, when faced with positive rewards. Recent research shows, however, contradicting results.

Similar to Prospect Theory were people prefer uncertainty over certainty in the negative domain we found that in the negative domain people prefer ambiguity over clarity. We assume that, sometimes, when people make decisions concerning negative outcomes, they would prefer to be more ignorant.
Biases & decisions 4 (SUITE 679)

“Mood effect in the car inspection market”
Tuesday 11:00 (SUITE 679).

Margaret Samahita (University College Dublin) with Osmis Habte, Håkan Holm.

Abstract:
Economists are increasingly acknowledging the role played by mood in decision-making. Laboratory experiments that randomly manipulate the mood of subjects find that mood does affect behavior (Capra, 2004; Johnson & Tversky, 1983; Kirchsteiger et al., 2006; Wright & Bower, 1992). However, less is known about how much mood matters in real life, outside the highly controlled laboratory setting. How large is the economic impact of mood effects, and is this something that is taken into account by economic actors? Answering these questions requires a careful study of mood effects in a field setting.

Ever since findings that people are more pro-social and happier on sunny days and Fridays (Cunningham, 1979; Farber, 1953; Schwarz & Clore, 1983), a number of studies have sought to establish the relations between extraneous factors such as weather, weekday and sports outcomes and individual-level behavior, supposedly through the former’s effect on mood. However, there are two limitations in the existing literature. Studies of weather effects using financial market data are typically based on aggregate measures such as stock returns (Hirshleifer & Shumway, 2003; Saunders Jr, 1993). This means that we cannot separate the effect of weather-induced optimism on one side from the strategic behavior of the other side who refrain from selling to keep prices high. Additionally, almost all of the existing papers only focus on one type of mood variable. Hence it is unclear if any effect on behavior is truly attributable to mood rather than other factors related to the source itself. This motivates us to investigate the effect of a number of sources of good mood. If indeed weekday, weather and sports results affect behavior through mood, we should see consistent effects on behavior on Fridays, sunny days and following sports wins when all these variables are studied together using the same measure of outcome, in our case the inspection result.

Car inspections provide an ideal setting to study the effect of mood on decision-making. Deciding the outcome of a car inspection involves cognitive processes where mood ought to play a role, according to mood-priming and mood-as-information theories in psychology. Previous studies of the car inspection markets show that inspectors do have some discretion and are affected by irrelevant factors such as the degree of competition around the inspector’s station (Habte & Holm, 2017; Hubbard, 2002). A separate survey of 517 Swedish car owners confirms that there exists a belief that car owners take weekday, weather or payday into account to increase the chance of passing inspection. Thus, this setting also allows us to separate the effect of mood on those affected (inspectors) from those who strategically exploit it (car owners).

Our dataset contains all Swedish car inspections from December 2015 to February 2018, which consists of around 6 million observations. We systematically investigate the potential effects of several sources of good mood on inspection results. Aside from weekday, weather and sports results, we also consider paydays and the last working days before public holidays as potential sources of good mood. If indeed these variables significantly affect inspectors’ mood, we should expect to find “mood effect” revealed as consistently lower failure rates on Fridays, sunny days,
paydays, following sports wins and on the last working days before public holidays. Our analysis yields a number of interesting findings. We find that mood does not have a consistent effect. The effect of major sports wins on likelihood to fail is around 0.6 percentage points lower or 3.8% relative to the mean failure rate, which is in line with existing studies such as Bassi et al. (2013). In the case of Fridays and last days before public holidays, failure rate is moved in the opposite direction by 0.4-0.5 percentage points, or roughly 3% relative to the overall failure rate, when controlling for car quality and all other observable characteristics. No mood effect is found at all on sunny days and paydays.

We also separately study the extent to which car owners behave strategically to exploit any mood effect on inspectors, as implied in the survey. Our rich dataset allows us to detect and control for any “selection effect”, whereby low quality cars are more frequently inspected on days predicted to generate good mood in inspectors. Such selection effect is expected to be stronger on Fridays, last days before public holidays, and paydays, which can be planned for, and less on sunny days and following major sports wins, which cannot be predicted perfectly. We find some indication of strategic behaviour on the part of car owners: the average car quality is indeed lower on Fridays and last days before public holidays, but the effect is small. A car needs to have been driven an extra 100,000 km to increase the likelihood of a Friday inspection by 0.4 percentage points, while an extra year in the car’s age only increases the likelihood of a Friday inspection by 0.1 percentage points. Additionally, it appears that car owners have private information about issues with their cars that are not captured by our control variables, but are detectable by inspectors, contributing to the higher failure rate observed on Fridays and last days even after controlling for observable measures of car quality. Less consistent selection bias is observed for good mood days which are more difficult to target, including weather and after sports events.

To sum up, our results indicate that mood has no clear effect in this particular domain, despite widespread belief about it. Car owners do behave strategically and take advantage of days when inspectors are predicted to be in a good mood. When mood is not predictable in advance and strategic behaviour is thus not possible, such as following major sports results, we see a clear evidence of mood effect on failure rate. At the other end of the spectrum, when mood is predictable in advance and car owners can strategically target, for example, Friday inspections, it appears that the selection effect is stronger than any mood effect and failure rate is consequently higher despite the predicted good mood.

“Interventions for rumination lead to different decision outcomes depending on age”

Tuesday 11:00 (SUITE 679).

Joyce Mertens (Maastricht University) with Wändi Bruine de Bruin, Thomas Post.

Abstract:
More responsibility for making financial decisions are shifted to individuals. A shift in responsibility toward the individual could lead to negative long-term consequences due to the inability to choose well (Bruine de Bruin, Parker, & Fischhoff, 2007; Bruine de Bruin, Strough, & Parker, 2014). Thus, identification of the driving forces in financial decision-making competencies are key to effective policy making. Two main forces influence decision ability: cognitive and non-cognitive abilities, such as affect. Identifying the non-cognitive mechanisms that contribute to the decision-making
competence is important due to an age-related decline in cognitive skills decisions (Bruine de Bruin, Parker, & Fischhoff, 2012; Del Missier, Mäntylä, Hansson, Bruine de Bruin, & Parker, 2013). Moreover, it is important to account for ageing-dependent changes in financial decision-making since society ages. A better understanding of these mechanisms advances the design of interventions that ensure improvement in the financial decision-making quality across the life span.

Decision outcomes depend on age-related by a decline in cognitive and an improvement in non-cognitive skills. More specifically, age-related differences in behavioral outcomes relate to several channels, including emotional self-regulation (Carstensen & Mikels, 2005; Mather & Carstensen, 2005; Nielsen, Knutson, & Carstensen, 2008; Slovic, Finucane, Peters, & MacGregor, 2002), motivation (Bruine de Bruin, et al., 2012; Hess, Queen, Ennis, 2012) and intelligence (Bruine de Bruin et al., 2007; Parker & Fischhoff, 2005; Peters et al., 2006). For example, decision-making quality improves with age because of increased experience (crystallized intelligence), while quality decreases because of diminishing cognitive skills (fluid intelligence) (Bruine de Bruin et al., 2012, Bruine de Bruin et al., 2014; Eberhardt, Bruine de Bruin, Strough, 2018). However, the channel emotional self-regulation seems to improve with age (Hess, Queen, & Ennis, 2012; Peters & Bruine de Bruin, 2012; Strough et al., 2011). Therefore, improvements in emotional self-regulation could compensate for age-related cognitive decline. Therefore, we focus on emotional self-regulation that could drive decision-making competence across the life span.

Emotional self-regulation is the ability to regulate and control emotions and emotional impulses. Older people are better able to regulate their emotions allowing for less influence in their decision-making process. Previous studies show that a reduction in negative affect in financial decision-making leads to improvements in decision outcomes for older individuals (Bruine de Bruin et al., 2014; Eberhardt, Bruine de Bruin, & Strough, 2018). Age-related decline in cognitive skills could lead older adults to rely more on their non-cognitive skills. Hence, we stipulate that emotional self-regulation is important for understanding why older adults make better decisions.

The impact of emotions on decision-making changes with age, since emotional self-regulation improves with normal ageing. With respect to age, it has been shown that older individuals are predominantly influenced by positive emotions (e.g. positivity effect), whereas younger age groups are influenced by positive and negative emotions. Decision scenarios can evoke negative emotions that influence decision outcomes negatively if these emotions are unregulated. In other words, age-related improvements in emotional self-regulation, thus a decreased sensitivity to negative emotions, could compensate for declines in cognitive ability.

We expand on the research of Bruine de Bruin et al., (2014), by creating a conceptual model (Figure 1) which links the various factors discussed and show their impact on decision outcomes. We propose emotional self-regulation as underlying mechanism for improved decision outcomes. We link improved emotional self-regulation and increased age to less rumination. Bruine de Bruin et al., (2014) show correlational evidence that older adults avoid rumination in financial decisions. Our contribution causally identifies the underlying process by utilizing interventions for rumination. Moreover, we include a different decision task, the disposition effect (e.g. holding on to losers and selling winners to quickly). Finally, we include an emotional self-regulation measure, a rumination scale, as well as a direct emotions measure. This allows us to study whether differences in decision outcomes occur due to changes in emotional self-regulation throughout the lifespan.

In this paper, we discuss the collected survey data to test our conceptual framework. We start from the premise that older people have less cognitive abilities than younger people do. Study 1 and 2 validate our developed rumination intervention, both induce and reduce. The difference between
study 1 and 2 is the additional sophistication of the reduce rumination intervention and an
additional rumination scale in study 2. The students automatically enrolled in one of the three
conditions: control, reduce rumination or induce rumination by clicking on the study link. Study 1
consists of 78 master students and study 2 consists of 820 bachelor students. Participants filled in
the disposition task in line with Aspara & Hoffman (2015). This is a vignette study and people
respond on how willing they are to hold/sell losing or gaining stocks on a 7-point Likert scale. This
difference in the willingness to hold/sell is the gain-loss stock is the disposition score. We find that
the disposition effect is highest in the induce rumination treatment, followed by the reduce
rumination treatment and then the control treatment. Partly supporting our hypothesis, we consider
that due to inefficient emotion-regulation spending more time on the task leads to negative
outcomes for younger participants even if it the focus is on changing the situation. Furthermore,
the action control scale (ACS) utilized by Bruine de Bruin et al., (2014) is included, which shows the
tendency to refocus on the actions you can take. The participants are more action focused in the
reduce treatment, then the control treatment, and then the induce treatment, which shows are
intervention works. Furthermore, we obtain data that shows the rumination scores in our sample.
These findings allow us to assess to what extent emotional self-regulation contributes to our
decision outcomes. In the upcoming study we expand our sample, (n=2000) and collect an age
diverse sample. We expect that a reduction in rumination will lead to improved scores compared
to control for older ages. Moreover, induction in rumination should have less impact to older
participants in comparison to younger participants.

“Thinking in a foreign language distorts reasoning”
Tuesday 11:00 (SUITE 679).

Damian Pieńkosz (Maria Curie-Skłodowska University) with Michał Białek, Rafał Muda, Paweł
Niszczota, Kaiden Stewart.

Abstract:
Aim
People make less decision biases when making a decision in a foreign language rather than in their
native language, which has been termed the foreign language effect (Keysar, Hayakawa, & An,
2012). Researchers proposed two possible reasons for the existence of this effect (e.g., Costa,
through decreased emotionality or through increased deliberation. However, attempts to answer
how exactly the foreign language effect works revealed that in the domain of moral
judgments, people are both less deontological and less utilitarian (Muda, Niszczota, Białek, & Conway, 2018).
This means that Type 1 processing decreased (i.e. emotionality was lower) and surprisingly, Type 2
processing also decreased, (i.e. deliberation was also lower instead higher). The present study aims
to test whether the above mechanism may be generalized to different domains. Using reasoning
task allows to directly distinguish between two types of processing (i.e. two possible explanations of
the foreign language effect). If the foreign language effect decreases Type 1 processing people
should be less biased by the believability of a conclusion (arousal explanation). If, on the other hand,
it increases Type 2 processing, people should be more accurate in logical thinking (cognitive
explanation).

Method
In both experiments, we had 209 participants. Participants were randomly assigned to one of the
conditions: the native language or the foreign language. We used 32 simple syllogisms, which were
valid or invalid, and believable or unbelievable. Participants stated whether the syllogisms were valid or invalid and rated the confidence level about the answers. In Experiment 1, syllogisms consisted of meaningful words coloured with red. This was done to control for the believability of premises. In Experiment 2, instead of meaningful words, syllogisms consisted of geometric shapes of different colours. This was done to ensure that reasoning in both languages was not distorted by meaningful words.

Results
In Experiment 1, in both languages, the believability of the conclusion did not influence the accuracy of reasoning (Dube, Rotello, & Heit, 2010). However, we observed that participants in the foreign language condition were less accurate in logical thinking and more biased by the believability of conclusions, i.e., they were endorsing believable rather than unbelievable syllogisms regardless of their conclusions’ logical status. Moreover, we observed that participants’ confidence rating in the foreign language condition did not differ between congruent and incongruent trials, whereas in the native language condition, participants were more confident for congruent trials compared to incongruent ones (note that this interaction effect was significant). We noticed the same pattern of results in the matter regarding the reaction times. Results of Experiment 2 replicated findings observed in Experiment 1.

Conclusions
Our findings suggest that reasoners in their foreign language are more biased (e.g., they rely on believability of a conclusion more), and less accurate in their second language. Most likely explanation is that they rely on believability of the conclusion much more, and thus fail to trigger type 2 processes to correct intuitions when logical validity is incongruent with believability. This is surprising, as most of past research suggests people are less biased in their second language. Nevertheless, these results undermine the deliberative explanation of the mechanism of the foreign language effect.

“Algorithm aversion or appreciation? Insights from a diary study”
Tuesday 11:00 (SUITE 679).

Alvaro Chacón (Pontificia Universidad Catolica de Chile) with Edgar E. Kausel, Tomas Reyes.

Abstract:
Since the historical victory of Deep Blue in 1997 over world champion Garry Kasparov, the gap in chess performance has widen in favour of supercomputers. Nowadays supercomputers have Elo ratings above 33001, in contrast with the highest Elo rating reached by humans (2882 by Magnus Carlsen; Collins, 2017). Chess is not the only task in which algorithms outperform humans—there is also ample evidence suggesting that algorithms do much better than humans in forecasting as well (Agrawal, Gans, & Goldfarb, 2018). The literature document this difference is large—it dates from at least the 1950s—and is well expressed by Grove, Zald, Lebow, Snitz, and Nelson (2000) in their meta-analysis comparing human experts and algorithms (i.e., mechanical procedures): “Superiority for mechanical-prediction techniques was consistent, regardless of the judgment task, type of judges, judges’ amounts of experience, or the types of data being combined” (p. 19).

Although algorithms tend to improve decision making outcomes, there is a growing body of research suggesting that decision makers often give them suboptimal weight, a phenomenon that has been termed “algorithm aversion” (Dietvorst, Simmons, & Massey, 2015). Yet, although the idea of
algorithm aversion has become quite popular, a recent study has found evidence for the reverse phenomenon, algorithm appreciation (Logg, Minson, & Moore, 2019): People are more likely to use advice from algorithms than from humans.

Better understanding of how we make decisions and how different recommendations influence individuals is relevant not only for decision makers but also for model developers and public policy. This calls for more research on understanding how we adopt and interact with algorithms and how the decision-making process of people evolves through time after receiving recommendations from algorithms with different accuracy, among others.

We argue that these conflicting findings are partly due to ignoring the day-to-day where actual decisions are made. In addition, we argue that the single decision tasks employed in these studies fail to capture how people experience repeated interactions with these decision aids.

As such, we studied algorithm adoption in daily decisions over time. More specifically, we conducted a diary study, in which 545 participants made weather (maximum local temperature) and financial (local currency exchange rate) predictions during 18 days based on daily advice. We used a 2x2 experimental design (advice type: human vs algorithmic; advice quality: accurate vs inaccurate) and an Experience Sampling Methodology (ESM), taking advantage of today’s availability of mobile devices and software (Van Berkel, Ferreira, & Kostakos, 2017). In every daily survey, participants had to forecast the value of the variable for the next day, then adjust their forecast after receiving the recommendation of an expert.

Longitudinal studies and particularly diary studies can capture experiences in a way that is not possible with traditional studies. The main benefits of diary methods are that they allow the analysis of events in their natural context, and they reduce the likelihood of retrospection, minimizing the time elapsed between the event and the registration of it (Bolger, Davis, & Rafaeli, 2003).

We used multilevel mixed models to analyse the effect of advice type, advice quality and time (number of days) on weight of advice (WOA) using a Judge Advisor System (JAS) framework. Our results suggested that there were no initial differences across advice type conditions. However, over time, and when the advice was inaccurate (i.e., when people saw the advice fail), people heed algorithm advice decreasingly. Indeed, at day 18, the advice given the least weight was the inaccurate algorithm. In other words, failing algorithms were penalized over time, in an incremental (as opposed to discontinuous) way. This suggests that, interestingly, inaccurate algorithms are more likely to accrue a negative reputation than inaccurate humans are. Also, we appreciate that when advice was accurate, there were not significant differences in reliance between algorithms and humans.

The output of the multilevel regression is shown in Table 1, and our main results are appreciated graphically in Figure 1.
Social behaviour 4 (SUITE 688)

“Was Banfield right? New insights from a nationwide laboratory experiment”
Tuesday 11:00 (SUITE 688).

Pierluigi Conzo (University of Turin & Collegio Carlo Alberto) with Arnstein Aassve, Francesco Mattioli.

Abstract:
The north-south gap in Italian social capital has been considered by inter-national scholars as an example of how cultural diversity within a country can generate different developmental outcomes. Most studies, however, suffer from limited external validity and measurement-error problems. This paper exploits a new and representative online lab-experiment to assess social capital patterns in Italy. Our study only partially confirms previous findings: northerners perform better in trustworthiness, but they are statistically similar to southerners in many other economic preferences such as cooperation, trust, expected trust-worthiness, altruism, and risk tolerance. A novelty of this study is that the gap in trustworthiness stems from the lower reciprocity of southerners in response to large transfers from trustors, and it is characterized by the intergenerational transmission of norms. Effective convergence policies should target, within social capital, reciprocity, while looking to other, and perhaps more compelling gaps.

“Do tightwads cheat more? An experimental study”
Tuesday 11:00 (SUITE 688).

Erez Siniver (College of Management) with Yossef Tobol, Gideon Yaniv.

Abstract:
Over the past two decades, behavioural economists and social psychologists have been designing numerous lab and field experiments with the purpose of deriving insights on people’s tendency to cheat. While the major experimental effort has been devoted to examining the effects of age, gender and background characteristics (e.g., field of study, academic achievement, professional identity, creativity, religiousness, criminal past) on dishonest behaviour, more recent studies have focused on the effects of cognitive and emotional states. Arguing that honesty requires self-control to overcome selfish impulses and that self-control necessitates cognitive effort, Mead et al (2009) and Gino et al (2011) showed that dishonest behaviour increases when cognitive resources have been depleted by prior exertion. Vincent et al (2013) found that subjects experiencing positive affect when facing temptation to misbehave were more likely to do so than subjects experiencing neutral affect, suggesting that positive affect provides the cognitive flexibility necessary to reframe and to rationalize dishonest acts. Schurr and Ritov (2016) reported that winners of a competition behaved more dishonestly in a subsequent unrelated task than competition losers, proposing that the experience of winning a competition enhances a sense of entitlement which provides a justification for moral disengagement. Siniver and Yaniv (2019) found that an optimistic mood engendered greater dishonesty than a pessimistic mood and that dishonesty was positively (negatively) correlated with upswings (downswings) in mood.

The present paper connects between dishonesty and the pain of paying, which is the displeasure, or the distress, associated with spending money (Zellermayer, 1996). Using this term to distinguish
between tightwads and spendthrifts, Rick et al (2008) define tightwads as people who feel intense pain at the prospect of spending money (and therefore tend to spend less than they would ideally like to spend), and spendthrifts as people who feel insufficient amounts of pain at the prospect of spending (and therefore tend to spend more than they would ideally like to spend).

Based on four questions posed to 13,327 respondents, Rick et al (2008) developed a scale that (indirectly) measures individual differences in the pain of paying. The questions asked respondents to rank themselves as tightwads or spendthrifts on a scale of 1 to 5 through judging which of two hypothetical shoppers (a tightwad and a spendthrift) more closely resembles their own shopping behaviour. Surprisingly, despite hearing a lot about overspending and under-saving, the researchers concluded that tightwads outnumbered spendthrifts by a ratio of 3 to 2.

The present paper reports the results of two field experiments designed to inquire whether, given the opportunity, tightwads are more likely to cheat than other people in order to avoid spending money. In the first experiment, passers-by at a Tel-Aviv shopping mall were asked to answer a questionnaire consisting of five questions, two borrowed from Rick et al (2008) and three original, so as to determine their position on a tightwads-spendthrifts scale. They were thereafter invited to perform an “inverse” version of the die-under-the-cup task which incentivized underreporting of the actual die outcome to avoid paying money. The second experiment was conducted with Jerusalem taxi drivers, many of whom avoid activating their air condition systems on hot summer days. This behaviour is perceived by their colleagues who do activate their systems as pure tightwadness. The experiment involved riding both air-conditioned and non-air-conditioned taxies in Jerusalem and offering drivers, at the end of the ride, to perform the “inverse” die-under-the-cup task. In both experiments, tightwadness was found to have a statistically-significant positive effect on dishonesty. The experimental findings are supported by a simple rational-choice model which predicts that the intensity of cheating increases with the pain of paying.

“Distinguishing reciprocity from the joy of destruction: An anatomy of money burning game”

Tuesday 11:00 (SUITE 688).

Katarina Cellarova (Masaryk University, Brno, Czech Republic) with Ondřej Krčál, Rostislav Staněk.

Abstract:

Introduction

Damaging tires on stranger’s car, vandalism, computer viruses, or spreading rumours, those acts are done all the time. This behaviour surely causes damage to someone else, and still, it is not easy to see what an advantage to act like that can be. Even though most of the experimental literature dealt with prosocial behaviour, studies by Abbink & Sadrieh (2009) and Abbink & Herrmann (2011) confirmed that people could be nasty also in the lab. They invented Joy of Destruction game, in which two players stand against each other, with the possibility to burn money for a small cost. Surprisingly, they found out that people were willing to pay for destruction in almost 40% of cases. It is quite a high number when one considers absurdness of this game. Paying for reducing the income of others is irrational not only from a game theory point of view.

Abbink and his co-authors claim that explanation is very simple – utility function increases when one behaves badly. If this increase is high enough, the dominant strategy in the joy of destruction game
changes from not burn to burn. However, there can be other possible explanations. Zizzo & Oswald (2001) in their original money burning game suggested that decision to burn can be driven by inequality aversion. There can also be a third solution – the simultaneity of decisions. With the reciprocity model proposed by Rabin (1993), we can formulate this game as a coordination game with expectations. Mutual-max and mutual-min outcomes predict the behaviour of players. I will be good if I expect that others will be good to me, and vice versa.

It is important to know, what is behind the decision to do damage. To prevent bad behaviour, we should know, what drives it, and search for good prevention against it. This work aims to distinguish between different explanations of what makes people behave like this.

Method
We use a laboratory experiment to distinguish between inequality aversion, reciprocity, and pleasure of being nasty in Joy of destruction game. We replicated their experiment by Abbink & Sadrieh (2009) and added more stages to it. Four parts were designed to measure motives, that make people harm in laboratory conditions. To prevent experimenter demand effect, we joined this experiment with another one. The first part was a replication of joy of destruction game. Two players receive the same initial endowment, and they can lower another player’s income. They know that partner is making decision at the very same time. This decision is costless. The second part of the experiment was belief elicitation, for which we used a method by between 0 and 100 with which player from first part lowered their money. If the probability Karni (2009). Subjects chose probability they chose is positively correlated with the decision to burn; it might be caused by reciprocity. If it is correlated negatively, the motive to burn can be the pleasure of being nasty. The third part relates to reciprocity vs. pleasure of being nasty as well. We rematched subjects and asked them whether they want to lower money of partner that decided to burn their money and whether they want to lower money of partner that decided not to burn their money. If they followed the actions of a partner, reciprocity might be key; if they always burn, the pleasure of being nasty might be the driver. The fourth part was played with a partner from another experimental session, that makes no decision. This partner was richer, and subject decided, whether she wants to lower this money to the same amount as she has. If this is the case, subject burn money because they are inequality averse.

Results
Our experiment was run in the Czech Republic in November 2018, with 300 subjects. Overall, the share of those who decided to lower partner’s payoff in part 1 was very small in the sample (8.7% burned, 91.3% did not burn). This decision was positively correlated with the belief – on average, those, who decided to burn stated 48 % higher probability that partner lowered their income. This suggests that people in the joy of destruction game decide to lower payoff because they expect that partner will do the same. This result is supported by findings from third part too – a number of conditional burners (followed decision of partner) was significantly higher than the number of destructors (burned regardless of the partner’s decision). There was only 6% of all subjects, that were inequality averse (followed the decision in the third part and lowered income of partner in part 4. Pure destructors (lowered payoff regardless of the partner’s decision) formed only 1.7 % of all subjects. Our findings suggest that statements about the pleasure of being nasty in a laboratory environment are too strong. People behave badly, but mostly in situations when they expect something bad can happen to them. Some people enjoy doing bad, but the share of them in our
experiment was very small. When we examine decisions, it is important to look to the situation in which they are made and try to avoid generalizing our results.

“Motivated motive selection in the lying-dictator game”
Tuesday 11:00 (SUITE 688).

Robert Stüber (WZB Berlin) with Kai Barron, Roel van Veldhuizen.

Abstract:
A large body of evidence suggests that people are willing to sacrifice personal material gain in order to adhere to a moral motive such as fairness or truth-telling. Yet less is known about what happens when moral motives are in conflict. We hypothesize that in such situations, individuals engage in what we term ‘motivated motive selection’, choosing to adhere to the motive that most closely aligns with their personal interest. We test this hypothesis using a laboratory experiment that induces in subjects a conflict between two of the most-studied moral motives: fairness and truth-telling. Our experimental design has the attractive features of being both parsimonious and closely related to both the classic dictator and lying games, implying comparability with a wealth of benchmark evidence. In line with our hypothesis, our results suggest that participants are more likely to adhere to the motive that is more in line with their self-interest.
Abstract:
As of 2016, close to 10 million older adults face the threat of hunger in the U.S., about 13.6% of the population age 60 and older—a 27% increase since 2001 (Ziliak and Gundersen, 2018). Not having enough money to buy food, as food insecurity is defined, poses “a major health care challenge in the United States” (Ziliak and Gundersen, 2018, p. 2). In older age, food insecurity is associated with poor physical and mental health (for a review, see Gundersen and Ziliak, 2015), higher health care utilization (Bhargava and Lee, 2016), and higher mortality (Ferri et al., 2012).

Lack of income and wealth are key hindrances to achieving food security (Gualtieri and Donley, 2016; Wolfe et al., 2003). For older adults, studies have found that heterogeneity in household wealth is even more important than income in predicting whether or not a household is food insecure (Ziliak et al., 2008). Yet not all wealth is equally accessible for households experiencing food hardship (Gundersen and Gruber, 2001). Housing wealth—an illiquid asset—is the primary source of wealth for many older adults, particularly those with lower incomes or who are black. In 2016, about 80% of U.S. older adults owned a home, and equity in a home comprised 69% of net wealth for older homeowners in the bottom 40% of the income distribution, compared to 24% for those in the top 20%. To access this wealth, it must first be converted to a liquid form.

Borrowing through a mortgage is the predominate mode by which older adults liquefy housing wealth. Newly borrowed funds may be used to pay for food, thereby reducing food insecurity. However, high levels of existing mortgage debt reduce the ability to be approved for additional borrowing in the future; for example, if older adults encounter a health shock (Gupta et al., 2018). Understanding the relationship between housing wealth and food insecurity thus requires careful treatment of home equity as well as new mortgage borrowing.

This paper adds to the literature by presenting new evidence on the impact of housing wealth on food insecurity for older adults. While prior studies find that status as a homeowner is associated with reduced food insecurity (Bartfeld and Collins, 2017; Huang et al., 2010; Men, 2017; Swann, 2017), the mechanisms underlying this relationship are poorly understood. Using data from the HRS, we identify financial mechanisms by which homeownership affects food insecurity. We isolate the effects of both home equity changes and new mortgage borrowing on food insecurity, allowing both to be endogenous, while controlling for a rich list of financial and social measures that are available in the HRS.

Our results confirm there is a statistically significant relationship between housing wealth and food insecurity. We first find that exogenous house price changes predict changes in food insecurity. Next, we find evidence of a causal relationship between changes in home equity and changes in food insecurity. While this finding suggests that increased housing wealth reduces the likelihood of food insecurity, the specific mechanism is not identified given that home equity is illiquid. In our final specification, we find evidence that new mortgage borrowing reduces food insecurity—with an
effect size that is larger than that for financial wealth. The results document the critical role of home equity and access to new mortgage borrowing as a “protective buffer” (Ziliak et al., 2008) above and beyond other financial resources.

“Understanding on-time mortgage payment history: An application of the responsible financial actions index”

Tuesday 11:00 (SUITE 687).

Gloria Preece (Indiana University) with Elizabeth Kiss, Maurice MacDonald.

Abstract:
The purpose of this study was to investigate the determinants that explain and predict an individual’s propensity to perform responsible financial actions and make on-time mortgage payments. The research was guided by Social Cognitive Theory (SCT) (Bandura, 1986) and explored personal factors, environmental influences, and attributes of behaviour as co-factors within a combined causal framework.

Data for this study came from the publicly available, 2009, 2012, and 2015 National Financial Capability Study (NFCS) datasets. These datasets were selected for the specific questions, timeframe, and richness of the financial information provided by the respondents. Responses for each survey were weighted to be representative of Census distributions according to the American Community Survey (FINRA Investor Education Foundation, 2017). The data are weighted to be representative of each state based on age, gender, ethnicity, and education.

The two variables of interest were the responsible financial actions index and mortgage payment history. To isolate the determinants of these two variables more accurately, this research adopted a multi-step approach to the analytical procedure. The analyses began with the construction of the responsible financial actions index – unifying the most fundamental responsible financial actions recommended by financial professionals into a single value. Once confirmed as a valid and reliable measure, the responsible financial actions index was explored empirically as both a dependent variable and a target variable.

Further analyses involved the application of the SCT Triadic Model to develop OLS and Multinomial Logistic regression models. Utilizing a series of regression models, this study explored empirically the hypothesized relationships among variables categorized as personal factors, environmental influences, attributes of behaviour, and on-time mortgage payment history.

When exploring variables to predict the responsible financial actions index, the OLS regression models provided consistent findings when analysing data from the 2009, 2012, and 2015 surveys. As predicted by the SCT Triadic Model, the following personal factors, age, subjective and objective financial knowledge, financial self-efficacy, and financial risk tolerance were significant across all three survey years. The following environmental influences were significant: income, educational attainment, and marital status.

To estimate the odds of paying a mortgage on-time, a series of Multinomial Logistic regression analyses were conducted. When evaluating these results, key findings were identified across all three years of data in two models. Model 1, never late vs. late once, and Model 2, never late vs. late
more than once. In Model 1, for all three years, self-efficacy was found to be predictive of on-time mortgage payment history. In Model 2, for all three years, both financial self-efficacy and the financial actions index were found to be predictive of on-time mortgage payment history.

These findings contribute to the body of empirical literature related to consumer economics and personal financial planning providing insight and understanding for how financial outcomes can be improved through basic responsible financial actions. This has important implications for financial professionals, counsellors, and educators given the applicable value for the responsible financial actions index. For example, these results should encourage educators to work towards identifying new pedagogical approaches for improving financial self-efficacy among students.

“Sky's the limit: An empirical investigation of maximum price and its effect on regret and trading decisions”
Tuesday 11:00 (SUITE 687).

Giovanni Burro (University of Warwick) with Julia Brettschneider; Vicky Henderson.

Abstract:
We carry on an empirical investigation of Regret Theory in dynamic financial decisions using data from actual stocks trading decisions (LDB dataset). We reject the prediction of Expected Utility theory that the optimal strategy for a decision maker implies stopping at a threshold. We investigate differences in adopting a threshold strategy in the loss and gain domain based on trading and investors characteristics. Furthermore, we analyse the impact of maximum price level and day of occurrence on the propensity to sell a stock for a gain. We find that investors are more likely to sell a stock in a moment closer in time to maximum occurrence and at a price further from running maximum price of the investment episode.

“Patterns, emotions, and memory in financial markets: An experimental study”
Tuesday 11:00 (SUITE 687).

Dimitra Papadovasilaki (Lake Forest College) with Federico Guerrero, Garret Ridinger, James Sundali.

Abstract:
There were several considerations in the design of this experiment. First, in continuing with our stream of research (Papadovasilaki et.al 2018, 2015; Guerrero et.al 2014; Sundali et. al 2012) on studying how laboratory subjects react to a market crashes, we wanted an investment task with a long time-horizon. Our prior experiments had subjects make asset allocation decisions for 20-30 periods. This experiment was designed with a much longer time horizon after the market crash to explore the diminishing effects of a market crash. Second, a long time-horizon allows for the study of how subjects react to patterns in returns streams. To begin simply, we will study how subjects react to prior return patterns of one, two and three returns. That is, how do subjects react when the previous return was positive (+) or negative (-), when the prior two returns were ++, +, -, and --, and a three-return stream pattern of +++, ++, +++, --+, --+, =-- and ---. Third, this experiment will examine whether biometric measures change in predictable patterns as subjects make allocation and forecast decisions.
The experiment utilized a between subject design. The manipulated variable was the sequential order of returns subjects received. Subjects were randomly assigned to one of two cohorts, either the Crash or Control cohort. What differed across cohorts was the sequential order of the returns received on the stock asset across the 56 years. Subjects in both cohorts received the same “set” of 56 annual returns but in a different order. We next explain the experimental task and the return streams presented to the cohorts.
“Farm household decision making around farm-level diversification strategies: Evidence from Northern Ireland”

Tuesday 13:30 (HOGAN 1).

Conall Mullan (Agri Food Bioscience Institute (AFBI)) with Adewale Adenuga, Austen Ashfield, Claire Jack.

Abstract:
Throughout Europe, entrepreneurship and farm business diversification is increasingly becoming an important aspect of modern farming. To maintain income levels, farm families continue to look towards off-farm sources of income usually off-farm employment. However, farm businesses, by their very nature, tend to have access to a range of physical resources, such as, land, buildings, capital and labour presenting opportunities for varying levels of diversification, (McFadden and Gorman, 2016). When making choices about diversification farm families must take consideration of a range of factors; for example what resources (land, capital and their own time) they have to spare and take advantage of; succession and family influence; and their own entrepreneurial drive.

Problem Statement
Farming in Northern Ireland, is relatively important in terms of its contribution to the economy; employing about six per cent of the total population (DAERA, 2017). The vast majority of farms in Northern Ireland are small family operated businesses; characterised by intergenerational succession and inheritance. These family farm businesses are increasingly required to become more productive in terms of managing resources, while maintaining food quality and implementing good environmental and animal health practices. Added to this, the United Kingdom’s decision to leave the European Union has resulted in increased levels of uncertainty for the agriculture sector around the future policy agenda. The key issues are around the UK’s proposed alternative to the CAP, particularly including farm payments and rural development support and the potential impact of new trade tariffs and trade agreements (Morris et al. 2017). In addition, Northern Ireland, (as the only UK region with a land border with the Republic of Ireland), faces further uncertainty in terms of how the decision to leave the EU will impact on trade along the agri-food supply chain. It is in this context that there is a need to examine ways in which farm businesses and households can be supported and sustained in this period of policy transition.

Research Question
In a potentially changing policy environment, there is a need to understand the characteristics and drivers that motivate farm based individuals diversify and that impact upon their diversification choices. As a result, this study is designed to provide answers to the following research questions:

• Into what activities do farm families normally diversify?
• What are the key factors affecting of farm families decisions to innovate and diversify?
• Are there significant differences in the motivating factors of farm families who choose differing strategies of farm diversification?
This study bridges a research gap as it provides the first updated analysis of farm diversification strategies and its drivers in Northern Ireland since 1995 (Moss and Lewis-Bowen 1995).

Data
The data set employed for this study was obtained through a postal survey of 525 farm businesses who had previously received NI Rural Development Programme (NIRDP) funding (2007-2013). Eligible applicants were farm owners and/or farm family members. The survey was made up of a number of sections that asked farmers about their diversification activity, their opinions of the NIRDP scheme, alongside a range of farm related and individual questions. Likert scale questions ranking from not important (1) to very important (5) were used to rank the farmers opinion of the importance of a number of factors on both their decision to diversify in general and also on the factors which influenced the diversification strategy they pursued. The survey was paper based with two reminder letters. A total of 160 farmers completed and returned the questionnaire equating to a response rate of 30 per cent.

Methods
The results from the survey focus on the reasons around the decision to diversify at farm level. An overview of the characteristics of respondents, their responses in terms of the importance of various motivating factors for diversification in general, and in terms of their choice of diversification business type were analysed using descriptive statistics. A multinomial logistic regression model was employed to identify and measure the differences in the importance ratings of motivating factors in terms of the diversification activities pursued by the farmers in three areas namely; product and service, tourism and renewable energy-based enterprises.

Results
The preliminary results of analysis are as follows:

- Energy based enterprises are shown to be more likely to be the choice of farmers who believe generating a new income source and exiting farming are relatively more important factor in terms of diversification. This could suggest that energy based enterprises are more likely to be created by those farmers wishing to step away from farming and to create an income source to replace the gap created from doing so. They are also more likely to have placed importance on government advice in their decision-making.

- Those who choose tourism enterprises, have done so to take advantage of their location and the local beauty of the countryside in which their farms are located.

- Product and Services businesses are more likely to have drawn on the educational background and skills set of their spouse/partner as an important factor when making the decision on the diversification strategy they followed.

- Both tourism and product and services businesses were more likely to consider the opportunity to renovate old farm buildings as an important factor, although more significantly for tourism businesses. This would be expected as an old farm cottage or outbuilding can more easily be converted to a bed and breakfast than a new build. In these cases, being able to use skills they had gained through farming was an important aspect of their decision to diversify.
Conclusion
The results demonstrate the variability of decision making around farm diversification strategies among farming households in Northern Ireland. The principal motivational factor in diversification is the generation of new income sources. However, the picture is much wider than this in terms of farm families’ choices with factors such as resource availability, succession planning and access to capital being important factors in farmer’s decision-making. The importance that farm families placed upon factors is shown to be significantly different according to the strategy which they chose to follow. From a policy point of view, the study shows more consideration needs to be given to a broader understanding of farm businesses and household preferences incorporating entrepreneurship and innovation. The analysis provides tentative endorsement of policy measures that move away from traditional agricultural support policies and place a greater emphasis on developing a more diversified rural economy and which encourages innovation and developing entrepreneurial skills at farm level.

“The neighbour effect on dairy farmers’ willingness to accept, adopt, and pay for a vaccine for Johne’s disease.”
Tuesday 13:30 (HOGAN 1).

David C. Hall (University of Calgary, Faculty of Veterinary Medicine) with Zhaoxue Ci.

Abstract:
It can be challenging to encourage dairy farmers to enrol in voluntary disease control programs, particularly when the benefits may not accrue quickly. We examine the willingness of dairy farmers to accept, adopt, and pay for a vaccine for Johne’s disease (JD), a chronic degenerative disease of cattle that exists with high prevalence in dairy herds in many countries including Canada and Ireland. We use a theoretical model to illustrate that peer pressure can influence farmers to adopt vaccination, that free riders may be a problematic component, and that enrolment may be below the optimal level required for effective control of the disease. Our model also suggests that without a powerful external regulatory policy, the optimal level of adoption cannot be achieved, and the free-rider problem overrides voluntary adoption. Furthermore, we used simulation based on data from a Canadian experimental economics pilot study to validate our findings.

Neighbours (we extended the term to peers) are considered as a source of information for farmers, and such information when considered in a network has been shown to impact on decision making and encourage partnership actions. As such, shame and guilt can impose sufficient social pressure to drive decision makers to make the socially acceptable choice, such as vaccination (Kwon and Jun, 2015) or adoption of a particular variety of rice (Ward and Pede, 2015). In the context of our research, we considered the choice to adopt JD vaccination as subject to social pressure from neighbours and set about testing this using a combination of experimental economics and simulation. We also considered the problem of a free rider: that is, a farmer may benefit from improved biosecurity if the neighbouring farm adopts vaccination and thus reduces the risk of disease spread in the first place.

A pilot study was designed to assess Canadian dairy farmers’ willingness to accept a JD vaccine (i.e., do you believe this vaccine is effective in controlling JD), adopt, and pay for a JD vaccine, based on knowledge
of the actions taken by a neighbouring farm. Using a sequential binary choice decision framework farmers were, at each stage, first presented with information regarding vaccine acceptance and adoption by a neighbour, and then asked if they too would accept, adopt, and pay for the same JD vaccine. Results with varying degrees of completeness from more than 240 Canadian dairy farmers were pooled to form a dataset for simulating scenarios of vaccine usage based on neighbours’ decisions. Farmers’ objective was to optimize herd health subject to cost constraints, following the Grossman (1972) model of health optimization and the work of Kandel and Lazear (1992) on peer pressure and partnerships.

Respondents were, on average, 40 years old, had 21 years of dairy experience, had completed at least high school or some university, and milked 147 cows on a farm of 571 has. All respondents had heard of JD and 80% had experience with at least one animal that had tested positive for JD. Veterinarians were considered the primary source of animal health information, with neighbours second most important, and government third. Based on responses to our experiment, simulation of 10,000 farmers’ responses yielded that most farmers (94%) viewed vaccination as acceptable; 5.5% would start from a negative position but move to a positive position regarding acceptability of vaccination if a neighbour also held a positive view. In contrast, if a neighbour were to hold a negative view of vaccination, 21% of farmers would be willing to move from a positive to a negative view of adopting vaccination. Despite high support for acceptance and adoption of a JD vaccine, 17% of adopting farmers would not be willing to pay for a JD vaccine, and 11% would pay less than the current average vaccine price, with the remainder willing to pay at least as much as current prices.

We also showed that if farmers were sufficiently confident that the risk of JD were low, and a neighbouring farm were vaccinating, then up to 10% of farmers would not adopt a JD vaccine. We interpret the behaviour of these farmers to be consistent with that of free riders where the assumption is the costs of adoption are too high to validate the benefits (small if any increase in biosecurity) under a low risk scenario.

In summary, information from neighbours matters with respect to biosecurity adoption decisions in dairy farming and free riding may be a problem that constrains disease control programmes. We propose our results provide evidence that biosecurity policies might consider regulatory framework that supports mandatory vaccination where disease is of considerable economic or public health interest. Our results are consistent with the Grossman and the Kandel and Lazear models of health and peer pressure in that dairy farmers with larger herds are more willing to invest in biosecurity, levels of effort vary with farm size, and small farms may be more likely to behave as free riders.

“Does mental accounting of farm produce lead to overconsumption of self-produced food?”

Tuesday 13:30 (HOGAN 1).

Jiaqi Huang (Wageningen University & Research (WUR); Agricultural Information Institute, Chinese Academy of Agricultural Sciences (All, CAAS)) with Gerrit Antonides.

Abstract:
This study applied mental accounting theory to consumption of self-produced food of agricultural households. Agricultural households, who are both food producers and consumers, are the most malnourished group particularly suffering from micronutrient deficiencies because of low dietary
diversity in many developing countries (FAO 2014; Pinstrup-Andersen 2007; IFPRI 2017). Unlike pure consumers who can only consume food from purchasing, many agricultural households eat considerable amounts of food from their own produce. Earlier, we found that producers consumed significantly larger amounts of the food that they produced than non-producers (Huang et al. 2018), and consumption was not influenced by market price and transaction costs, contradicting the standard agricultural household model.

We turn to the theory of mental accounting, developed in behavioural economics (Thaler 1980, 1985, 1999), to explain the farmer’s consumption of self-produced food. We do so because we found the way farmers deal with food reserves to be quite similar as the process of financial budget setting and expenditure tracking explained in the mental accounting theory of consumption expenditures. Agricultural households usually reserve an amount of self-produced food for own consumption (Fanzo et al. 2013; Sibhatu and Qaim 2018), which can be seen as a kind of “food budget,” not presented in the form of “food money,” but in the form of a “food quantity budget.” The farmers’ overconsumption that we observed could be an outcome of the mental accounting process. People tend to track the pre-set mental budget, neglecting expenses in other accounts, consequently leading to either overconsumption or underconsumption (Heath & Soll, 1996).

Although our previous research showed insignificant effects of price and transaction cost on consumption of self-produced food (Huang et al. 2018), supporting the mental accounting assumption, we were not able to assess whether households track their food consumption against the set budget. In this new follow-up study, we explored this question by creating surplus and shortage situations with respect to the household food budget in the middle of a consumption period and observed the farmer’s choice of food consumption in the next half of the period. We conducted a face-to-face household survey of 424 agricultural households in four poor rural counties of southwest China in August of 2018 by using a scenario approach to study people’s hypothetical decisions. For each agricultural household we first asked, “How many kilograms of rice does your household needs to consume in a year?” If the given number was X kg, we then offered two different scenarios. Scenarios A stated: “You just said your household needs to consume X kg a year. Suppose that your household reserved 1.2X kg of rice in the harvest season. Now, half a year has passed since the harvest. Imagine you have consumed 0.4X of your own-produced food, you have 0.8X left for the remaining half of the year, and you are able to sell your self-produce to the market. How much will you consume from your own produce in the next half year?” In scenario B, we just changed the consumed amount into 0.6X, leaving 0.6X for the remaining half year.

The two scenarios were presented to each household and for two types of commonly produced food: rice and potatoes. All food amounts were stated in kilograms based on the rice demand reported by the household in response to the first question, and automatically calculated by the electronic questionnaire software. Well-trained enumerators asked the questions to the respondents and recorded their answers on the electronic questionnaire equipment. Also, in order to explore the relationship of mental accounting propensity we gathered from the scenario’s questions and the overconsumption status in real life, we asked detailed information of food quantity consumed (both from self-produce and from market purchases), prices, expenditures, and markets, as well as demographics.

We made three hypotheses for possible relationships. Hypothesis 1 assumes households take the food they think they need (X) as the total budget, and do not adjust their consumption to situations
of surplus and shortage, which means they do not track against this budget and do not compensate. So, in both scenarios A and B, people will consume 0.5X in the remaining half year. Hypothesis 2 assumes households take the food they think they need (X) as the total budget, track against this budget and compensate. So, in scenarios A and B, people will consume 0.6X and 0.4X, respectively. Hypothesis 3 assumes households take the food they reserved (1.2X) as the total budget, track against this budget and compensate. In this case, in scenarios A and B, people will consume 0.8X and 0.4X, respectively. We found 24.6% of the households’ answers were consistent with hypothesis 3; 5.31% for hypothesis 2; and 7.31% for hypothesis 1. These figures show that households tend to take what they reserve (1.2X) as the set budget and track against it when the reservation is slightly larger than what they need. Also, in scenario B, which is the shortage or scarcity situation, many more households showed behaviour of tracking against the budget and compensating (43.87% chose 0.4X) than in scenario A (23.58% chose 0.6X).

By probit regression analysis, comparing people who showed mental accounting with those who did not, on factors that may influence mental accounting, we found respondents who do produce potatoes tend to do significantly more mental accounting of consumption of self-produce (Coef.=0.485, p<.01), and who live in a household with more members tend to do significantly less mental accounting (Coef.=0.081, p<.10). Discussion within a household with more household members may be helpful for making more rational economic decisions. Furthermore, we found that people who did mental accounting in the scenario questions consumed significantly larger amounts of potatoes than those who did not (t=-2.279, p<.05), and we found a significant positive mental accounting effect on the log of consumption of potatoes (Coef.=0.225, p<.05) by regression analysis. The direction of the effect was similar for rice consumption, but not statistically significant.

In conclusion, we found a considerable number of agricultural households showing mental accounting of consumption of self-produced food, leading to more consumption of self-produced food.

“Unfolding the bias in farm nutrient management”
Tuesday 13:30 (HOGAN 1).

Sandip Agarwal (Indian Institute of Science Education and Research (IISER) Bhopal) with Keri Jacobs, Quinn Weninger.

Abstract:
Farm nutrient decision is at the centre of agricultural decision-making, which has its relevance for several aspects of agricultural productivity, risk management and agricultural policy making. The nitrogen decision made by a farmer hinges on their subjective belief about the nitrogen yield relationship, coupled with their perception of uncertainty and risk preferences. Agronomists and agricultural economists have commonly used data on yield ex-post the growing season to analyse optimal nitrogen choice, which progresses under the assumption of rational expectations (exceptions include Sri Ramaratnam et al. (1987); Paulson & Babcock (2010)). However, rational expectation assumption could lead to contradictory results that may not be supported by true beliefs, if measured (Manski (2004)).
In this paper, we measure farmers’ yield expectations and subjective beliefs surrounding their farm management practice through a web based primary survey among farmers in Central Iowa following “chances out of 100” format (Manski (2004)). The questions include crop yield expectations conditional on nitrogen applied and elicit points on their subjective yield probability density around the reported expected yield. Moreover, the expected yield corresponding to different counterfactual levels of nitrogen around the applied levels of nitrogen are also elicited (Agarwal et al. (2016)). These two pieces of information are used to characterize the subjective belief of farmers surrounding their nitrogen decision. The sample size consists of 123 corn producing farmers from central Iowa. While the survey data is used to characterize subjective beliefs, the nitrogen experimental data form the agronomists is used as a benchmark model for the purpose of comparison of subjective beliefs.

Using the elicited cumulative probability of farm yield conditional upon nitrogen usage, a beta density is fit to estimate the first three moments - mean, variance and skew of the nitrogen conditional subjective yield distribution. A comparison across the three moments with nitrogen as the central focus reveals that the yield standard deviation is lower for farmers, whose nitrogen application lie closer to the tails of the range of nitrogen application. The yield variability is observed to be highest around 180 lbs./acre (average nitrogen usage across the sample). It is also found that high yield variability is accompanied by high positive yield skewness or close to 0 negative yield skewness.

The estimated moments are regressed on farmer and farm characteristics, and the farm management variables to identify if there is an evident pattern in the subjective beliefs. As expected, the mean yield is significantly lower for the average producing or the under-performing yield, and also significantly higher for the fields with higher Corn Suitability Rating (CSR). It turns out that farmers, whose land ownership as a percentage of their total operation is higher, have significantly lower mean yields. Farmers, who have reported delays in pollination dates, expect relatively lower yields. The coefficient for nitrogen is insignificant, ruling out that farmers applying higher nitrogen expect higher mean yields. Farmers, who have reported to share the nitrogen management decision, have reported higher mean yield to an extent of 9 bu./acre.

The yield variability measured through the yield standard deviation is not different across different field productivity types. Yield variability is significantly lower for farmers, whose land ownership as a percentage of total operation is higher or the reported field size is larger. Farmers, who have reported delays in pollination dates, expect relatively lower yield variability. The nitrogen term has a positive sign, which confirms that nitrogen is a risk increasing input (Just & Pope (1979)). However, a negative and significant coefficient of the quadratic term for nitrogen limits the belief of nitrogen to be risk increasing beyond 190 lbs./acre, where the yield variability again falls. Beliefs of higher yield variability also exist for farmers, who have sought advice from agronomists at the co-op.

Yield skewness do not vary across field type. The negative and significant sign of nitrogen applied before planting strongly conforms to earlier research that nitrogen reduces yield skewness (Day (1965); Du et al. (2012)). This suggests that farmers believe higher levels of nitrogen application to place them in a more favourable yield environment by reducing the downside yield risk. Farmers having larger operations believe in reduced yield skewness, but if the size of the field in context is higher, the yield skew is higher. Role of advice (both field specific nitrogen advice or nitrogen advice
from ISU extension) seem to increase yield skew. Farmers who have received a college degree or higher seem to believe in relatively lower yield skewness.

Marginal Product of Nitrogen (MPN) is estimated from the recorded expected yields under the actual and hypothetical counter-factual levels of nitrogen application. A mixed effects model is used to estimate the MPN, where the field specific effects (a Best or Average producing or an Under-producing fields) are captured using field specific dummy variables and farmer level heterogeneity is captured through random effects (using random intercept and random slope). There is significant evidence of an upward bias in the MPN. While, there is evidence of lower MPN for farmers, who are at the higher end of nitrogen application, the upwards bias is pervasive.

Using the estimated subjective MPN, bias is computed as the excess of subjective MPN over the objective benchmark. The computed bias is regressed on farmer and farm level characteristics and farm management variables to unfold evidence of any hidden pattern that correlates with the bias. The bias seems to be lower for farmers using higher levels of nitrogen, and even lower if the nitrogen has been applied during fall or after planting instead of before planting. Among the field types, the bias is significantly lower for under-performing fields. For farmers, who reported to have received field specific nitrogen advice, the bias is significantly lower. However, nitrogen advice from professional consulting firms or other farmers is associated with higher MPN bias. MPN bias is also lower for farmer, who manages larger number of fields. Delays in planting and pollination dates have evidence of higher MPN bias. Strong subjective bias is present for farmers, who have conducted or plan to conduct a nitrogen test. Elder farmers seem to be less biased about their MPN beliefs. MPN bias is higher for farmers, who believe the yield to have higher variability. Similarly, MPN bias is higher for farmers, who believe yield density to more positively skewed.
“A grounded theory study of how financial planners assess and manage risk”

Tuesday 13:30 (HOGAN 2).

Ian Smith (Manchester Metropolitan University).

Abstract:
One of the few prescribed components of providing investment advice is determining the risk profile of the investor. Regulatory bodies in many jurisdictions as well as making the assessing of risk a mandatory part of the investment advice process have also noted the multidimensional nature of risk (Marinelli & Mazzoli, 2017; Gerrans et al, 2012; McCrae, 2006; Moore, 2018). It was also noted that although regulators make the provision of risk tolerance assessment mandatory, they fail to prescribe any suitable method, Brayman et al., 2017).

UK Financial Planners like those in other jurisdictions are required to assess the risk profiles of their clients. This article is based on the authors initial research into how the planners conduct the process of ascertaining an appropriate level of risk and aims to explore the strategies they employ to manage their client’s behaviour.

As the research area has limited literature and no existing theory to test a grounded theory approach was adopted. Given the research focuses on the interaction between financial planners and their clients this method has been shown to be an appropriate tool for exploring social interaction (Glaser & Strauss, 1967; Charmaz, 2011).

Financial planners were interviewed and asked to discuss how they assessed the risk tolerance and the risk capacity of their clients and to discuss how they managed their client’s reactions to investment risk. These anonymised interviews were recorded, and transcripts produced. An in-vivo open coding analysis was then conducted identifying concepts and themes from the transcripts and given conceptual labels. Similar themes can then be identified by grouping them using the labels, (Corbin & Strauss, 1990).

It was determined that all of the respondents made use of proprietary software systems to assess their clients risk profile. The use of such tools has been widely adopted in many locations, Brayman et al., 2017). The systems used by the planners were all psychometrically based which is the type generally found to be most reliable (Callan & Johnson, 2002; Hallahan et al., 2004)).

In addition to using risk profiling software the respondents made use of discussions with the clients as a means of both educating and elucidating further information to assist with determining their risk profile. These discussions were based on illustrating previous investment risk and return history in two ways:

Using graphical evidence.

Using narratives.

A number of studies have suggested that using graphs is the most effective method to convey financial information e.g. Ervin, 2004), Kaufmann et al, 2013). In Siebenmorgen et al, 2000), different methods of presenting investment data to potential investors were examined. The effects
were measured in terms of the investors subsequent accuracy in perceiving the future expected returns and risks of a series of investments. The graphical presentations were shown to provide the subjects with the greatest improvement in their judgement.

There is however a potential problem that the data presented by the financial planners could be misleading if the framing of the graphical data creates misperceptions of the risks involved. Benartzi, & Thaler, (1999) demonstrated using two mock funds one with the performance history of US Equities and the other US Fixed Interest bonds that the data based on the length of holding period affected how much of the respondents’ fund was allocated to the riskier equity fund. When short-term data was used less was allocated to equities and when longer data more. Diacon & Hasseldine, (2007) investigated this further, having firstly discussed the potential for the misrepresentation or manipulation of data and the danger of reliance on past performance data. In their study they sought to test hypotheses that both the format and timescale of investment data shown to individuals would influence both their perceptions and decisions. They presented two UK funds representing UK Equities and Fixed interest data in a variety of formats to their respondents. Whilst the data used and labelling of their graphs was not entirely suitable, it was the time series graphs that the respondents rated as being the most useful in explaining risk.

The use of narratives to convey information is also identified as an effective method in literature. The respondents made use of discussions with clients using narratives to describe risk in terms of their experience and the experience of their other clients. Whilst this has not been widely discussed in previous literature on planners’ interactions with clients the use on narratives is known to be a compelling and effective means of imparting knowledge, (McGregor & Holmes, 1999, Connell et al., 2004, Gilham & Flaherty, 2015).

The discussion between planner and client on risk is an important part of determining the correct risk profile, Ryack et al., (2016). One of the areas that can addressed in these discussions is that the planner can challenge any misapprehensions the client may have regarding investment, McGuigan & Eisner, (2003). In an Open University paper Collard et al., (2015) the view of an expert panel used for the paper was that the risk profiling process should be used to provide financial education. Households that use financial planners were shown to have a much more consistent attitude to risk and to less prone to acting on behavioural biases (Park & Yao, (2016)). As discussed in Wendel, (2018), investors who acted on fear responses reduced their portfolio values by 8-15% over a 10 year period.

The discussions that planners have with their clients regarding investments are used to demonstrate the planner’s knowledge and to educate the client. Both of these are areas associated with the levels of trust. In financial services the level of participation is linked to the level of trust that the potential investor has in the financial system (Guiso et al., (2008)). Increased Financial literacy has been shown to increase trust, Lachance & Tang, (2012), Calgagno & Monticone, (2015) and increased financial literacy is also linked to a higher risk tolerance Grable & Joo (2000), Wagner, (2011).
"Sensation seeking and attitude toward financial risk"

Joanna Sokolowska (University of Social Sciences and Humanities SWPS) with Piotr Hajda.

Abstract:
The concept of risk attitude, also called risk preference, is often used in economic and psychological theories of choice to explain individual differences. In psychological and economic research, the most common measures of risk attitude are: (1) elicitation of risk attitudes from preferences over lotteries or (2) psychometric approaches. In the latter case, respondents indicate how much they agree with statements that express the likeliness of risky situation (e.g. “I like taking big financial risk”, Pennings and Smidts, 2000; Hoffman et al., 2013). Pennings and Smidts (2000) compared the predictability of these two measures of risk attitudes using data from interviews with 346 Dutch owner-managers of hog farms. Even though both measures demonstrated some convergence, those based on lotteries were better predictors of actual market behaviour. The psychometric scale showed more agreement with self-reported measures of innovation, market orientation, and the intention to reduce risk. In contrast, Dohmen et al. (2011) found a strong relation between both measures.

In both approaches, risk attitude is assumed to be a stable personality trait. Weber et al. (2013) confirmed that self-reported risk attitudes did not change with market changes. Dohmen et al. (2011) also supported the idea of the stability of risk attitudes. Such attitudes to different behaviours - such as holding stocks, occupational choice, smoking and preferences for lotteries - were strongly correlated. Very strong support for the stability of risk attitudes comes from Beauchamp et al. (2015) who examined five commonly used measures of risk attitudes in a sample of 11 000 Swedish twins. The first measure is a series of sub-questions about hypothetical gambles concerning one’s lifetime wealth (e.g. concerning pension plans). The next two measures, the same as those used by Dohmen et al. (2011), addressed financial risk attitudes and risk attitudes in general. The last two measures were related to preferences either for a sure thing or for a lottery. Beauchamp et al. (2015) documented salient associations between risk attitudes and investment decisions, entrepreneurship, smoking, drinking, gender, cognitive ability and personality. These findings strongly support the concept of stable individual differences in risk attitude that are related to differences in economic behaviour. Thus one may conclude that there does exist a common underlying risk trait.

A good candidate for such trait might be the biologically rooted dispositional tendency for sensation seeking (Zuckerman, 1994, 2007). “Sensation seeking is a trait defined by the seeking of varied, novel, complex, and intense sensations and experiences, and the willingness to take physical, social, legal, and financial risks for the sake of such experience” (Zuckerman, 1994, p. 27). To measure this tendency Zuckerman (1994, 2007) developed the Sensation Seeking Scale (SSS-V). Since Zuckerman (2007) assumed that sensation seeking is biologically rooted, individual profiles should be relatively stable across different domains. He supported this conclusion with studies that illustrate a high positive correlation between the SSS-V and risk preferences in various contexts such as drugs and alcohol use, driving and sports, sexual behaviour, and behaviour related to health and financial risk. Thus, the SSS-V might be a good measure of risk attitude defined as a relatively stable dispositional tendency.
However, very few researchers investigated the relation between SSS-V and financial taking in particular with individual investors. Therefore, the goal of the study was to check psychometric properties and theoretical validity of SSS-V as a predictor of risk evaluation and risk taking by individual investors. To do this, two studies were carried out with individual investors in the stock markets. Randomly drawn participants received financial rewards (either 250 or 125 euro). In both studies investors selected one portfolio out of the presented set. In Study 1, 359 investors chose one of 4 portfolios that consisted of shares of two firms. Shares of firms A and B differed with respect to return rate and its standard deviation. Risk was defined as variance of return rate. In Study 2, 303 investors chose one of two 5-outcome investment options with the known distribution of outcomes. There were two sets of investment options. In Set 1, the 6 pairs of options were constructed such as Options A were favoured by MiniMax strategy and Options B were favoured by MaxiMax strategy. In Set 2 in each of 6 pairs, Options A represented a Short shot, while Options B represented a Long shot. In both sets Option A was assumed to be less risky.

In both studies, to control whether respondents perceived risk accordingly to assumptions, they rated riskiness of options: in Study 1, on the scale from 0 (not risky) to 10 (very risky) and in Study 2, on the scale from 1 to 10. The results were in agreement with assumptions. In Study 2, respondents also rated attractiveness of options on the 0-10 scale.

The SSS-V (Zuckerman, 1994) was administered to measure differences in sensation seeking. This scale consists of 40 items with a forced choice response format. The Cronbach’s Alpha for all items was 0.80 and 0.84 in Studies 1-2, respectively. Cronbach’s Alpha was higher for the whole scale than for subscales. 4 factors obtained from PCA (varimax rotation) accounted for 28.83 and 40.44% of variance in Studies 1-2, respectively. However, only Factor 1 was consistent with TAS in both studies and explained 9.74% and 9.8 of variance, while other items do not fit 3 subscales proposed by Zuckerman.

As for theoretical validity, based on preliminary analysis the SSS-V score correlated significantly with risk rates (r=-0.204, p<0.001, N=335) and number of risky choices (r=0.326, p<0.001, N=350) in Study 1. In Study 2, the SSS-V score correlated significantly with risk rates (r=0.141, p<0.014, N=303) and with attractiveness rates.

“Choice bracketing and cognitive load in credit repayment”

*Tuesday 13:30 (HOGAN 2).*

*Erik Hoelzl (University of Cologne) with Michael Blens.*

Abstract:
With consumer credit on the rise in most Western countries, also the number of consumers holding several credit accounts simultaneously is rising. Keeping track of financial obligations and balancing available funds between different obligations can be a daunting task. Previous research (e.g., Amar et al., 2011) showed that consumers try to simplify such situations by reducing the number of open debt accounts. This ‘debt account aversion’ can, in some constellations, backfire when it leads consumers to disregarding other financially important aspects, such as the interest rate connected with the respective accounts.
Dual-process models highlight that decisions are influenced by an interplay between automatic and controlled processes (e.g., Strack & Deutsch, 2004). In certain situations, controlled processes are hindered, making automatic processes more influential. A common method to produce such situations is cognitive load: By partly blocking working memory, resources for controlled processes are reduced (e.g., Baddeley, 2012). In such cases, decision heuristics often become more pronounced. Consequently, we hypothesized that cognitive load would decrease efficiency in debt repayment because consumers would show a larger degree of debt account aversion.

Consumers not only have financial obligations for credit, but also need to take care of other household expenses, such as paying bills for repair, medical needs and so on. Research on mental accounting suggests that consumers treat their financial resources not as a single budget, but rather split it into topical mental accounts – such as expenses for leisure versus food – with potential negative consequences for economic efficiency (e.g., Thaler, 1999; Heath & Soll, 1996). In a related vein, research on choice bracketing points out that decisions can be grouped together or be kept apart. Grouping decisions together (‘broad bracketing’) frequently leads to higher efficiency than keeping decisions apart (‘narrow bracketing’) (e.g., Camerer et al, 1997). Consequently, we hypothesized that broad bracketing, i.e., seeing all decisions related to expenses as belonging together, would improve efficiency in debt repayment.

We tested these assumptions in an extension of the debt management game by Amar et al. (2011). Over 10 rounds, participants were assigned a household budget for each round and needed to allocate it to different expenses. Some of these expenses concerned bills and were compulsory. Others concerned credit repayments and were discretionary – participants could decide how to distribute their money over several debt accounts with respective interest rates. These debt accounts were set up in a way that some smaller debt accounts could be completely closed, but that the optimal solution was to allocate all available budget to the largest debt account. Participants were given the goal to minimize the overall debt amount after round 10 and this goal was incentivized. In a 2x2 design, we varied cognitive load (low vs high) and choice bracketing (narrow vs broad). Cognitive load was induced by having participants memorize a simple or complex letter string before each round that they had to reproduce after each round (incentivized). Choice bracketing was induced by labelling expenses separately (‘expenditures for care and maintenance’ vs ‘expenditures for furniture and consumer electronics’) or jointly (‘household expenditures’) as well as presenting them on separate pages or on the same page (Moher & Koehler, 2010).

Results from the 167 participants replicate previous findings from Amar et al. (2011) by showing that, on average, participants acted suboptimal and exhibited debt account aversion. There were no significant main effects of cognitive load and choice bracketing, but a significant interaction between these factors. In narrow bracketing, higher cognitive load resulted in worse overall outcomes. However, in broad bracketing, cognitive load did not make a difference. This pattern suggests that broad bracketing can counteract the negative impact of cognitive load.

Implications for debt advice can be derived in that debtors should keep track of the total expenses and see the financial decisions in their household in a broad bracketing view; in other words, they should avoid splitting credit-related expenses from other expenses.
Wealth, financial literacy and behavioral biases: Evidence from Japan

Tuesday 13:30 (HOGAN 2).

Vikas Kakkar (City University of Hong Kong) with Masao Ogaki, Shizuka Sekita.

Abstract:
This paper considers the relationship between wealth, financial literacy and several other variables using data from Japan’s first large-scale survey on financial literacy. Using an instrumental variables approach to account for possible endogeneity of financial literacy, we find that financial literacy has an economically large and positive impact on wealth accumulation. We also decompose financial literacy into 5 sub-categories and find that deposits literacy, risk literacy and debt literacy have significant impacts on wealth accumulation in Japan, whereas inflation literacy and insurance literacy do not. In addition to financial literacy, several variables suggested by behavioural economics, such as over-confidence, self-control, myopia and loss-aversion are also significant determinants of wealth.
Well-being 1 (NALLY)

“Do we need creativity?”
Tuesday 13:30 (Nally).

Louis Lévy-Garboua (Paris School of Economics, Pantheon-Sorbonne University) with Noémi Berlin, Jan Dul, Marco Gazel, Todd Lubart.

Abstract:
In a harsh economic context characterized by strong competition and a vital need of all individuals to adapt to a complex and changing environment, creativity is considered as one of the main “21st century skills”. The aim of this paper is to bring an experimental proof of this current belief. We move one step further by showing that being or becoming creative is even needed for a successful adaptation to the world ahead. We designed a lab experiment on high school students and a field experiment on middle school students using precise measures of their creative potential. We examined then how the various components and dimensions of their creative potential affected adolescents’ performance in simple repetitive tasks and in more complex tasks occurring in a changing environment. We obtained remarkably the same result in both experiments: creative adolescents were better decision makers and earlier adopters of innovations, but exclusively in the more complex settings occurring in a changing environment. Significant returns to creativity are observed in such tasks even after controlling for gender, personality, incentives, and other factors. For the selected tasks, divergent thinking followed by subsequent convergence proved to be the optimal strategy for discovering the solution to complex and novel issues. Creative thinking was even found to be a necessary condition for high performance. Unfortunately, the analysis of grades to a national exam shows that French schools focus on the acquisition of existing knowledge by valuing consciousness and depreciating divergent thinking.

“On the role of personal values and philosophy of life in happiness technology”
Tuesday 13:30 (Nally).

Tal Shavit (The School of Business Administration, The College of Management Academic Studies, Rishon-Le‘Zion. Israel) with Guy Barokas, Arie Sherman.

Abstract:
Prominent economists have understood real income to be equivalent to human subjective well-being (SWB). Does this imply that working more hours and investing in labour productivity in order to increase one’s budget is the major source of improved well-being? Recent research in the economics of happiness reveals that money buys less happiness than predicted by standard economic theory. Income explains only a relatively small part of the variation in the happiness of the population. This finding suggests that analysing individuals as consumers who derive utility from market purchases is insufficient. We suggest that individuals should be analysed as active maximisers who engage in extensive production and investment activities for developing “happiness technology.”

The paper investigates the properties of happiness technology. Shedding new light on these properties can make an important contribution to happiness studies by showing that greater well-
being might be produced by improving the happiness technology. Better understanding of the constructs of human happiness is required for improving our understanding of the decision making process, since affect, emotions and decision making are strongly correlated. We provide a theoretical model as well as empirical evidence that personal values and philosophy of life (henceforth, “PVPL”) concerning money and material consumption are among these properties. We argue that the transformation of income into happiness is idiosyncratic because it depends on technological properties. Different people with similar pecuniary resources and socio-demographic characteristics may experience different levels of happiness due to variations in PVPL.

We provide novel empirical evidence for the combined effect of the three components of happiness technology on SWB. Our data pool consists of 980 salaried employees aged 25-64, and our findings show that PVPL explain significant variance of employee’s SWB, measured by Central’s ladder question. In comparison to previous results, we find that the effect of happiness technology, assessed by the three components of PVPL, is greater than the effect of a single parameter – financial satisfaction – on SWB. We find little correlation between PVPL and net income, implying that individuals can affect their level of happiness through technological progress for any level of income. This finding is important in a time when people suffer from a lack of hope, particularly for those at the bottom of economic and social hierarchy. The results are robust when controlling for socio-demographic factors, health, wealth as assessed by home ownership, and affective components of SWB.

We suggest that the educational system should be designed not only as a means of increasing labor productivity and wealth, but also for developing emotional intelligence, which can be taught at home, by parents, and at school, by teachers. To have a great impact on society, one purpose of schools should be teaching children about the secrets of happiness. Among the many secrets already known, we argue that learning about the negative consequences of materialism, and about the positive effect of income satisficing would help young people grow into happy adults. We also suggest considering the effect of delaying gratification on materialistic values. When the ability to delay gratification is low, people tend to buy more goods or, in another words, become more materialistic. Some studies show that it is possible to teach children this ability, for example by giving them a regular allowance.

“The effects of chronic illness on aspirations and subjective wellbeing”
Tuesday 13:30 (Nally).

Sung Soo Lim (Calvin University).

Abstract:
Many studies across disciplines assert that chronic illness and emotional wellbeing are closely related. Yet, the literature has paid little attention to the mediators of the relationship from a socioeconomic perspective. In particular, studies have rarely, if any, investigated the effects of chronic illness on, among others, aspirations, the failure of which may be linked to a self-sustaining trap of poverty especially in developing countries. The issue is nontrivial in that the welfare of future generations may also be affected by the aspiration failure as the future-oriented behaviours of the poor are influenced by emotional wellbeing such as despair and frustration triggered by changes in their relative socioeconomic status over the period of illness. In this sense, the lack of attention to
the aspiration failure as the mediator between chronic illness and emotional wellbeing is remarkable in the literature.

Using two waves of Indonesian Family Life Survey (IFLS 2007, 2014), this paper examines the effect of chronic illness on aspirations and the channel through which the duration of chronic illness affects aspirations and emotional wellbeing. To this end, this paper uses a variable measuring the aspirations gap, constructed by a difference between an individual’s current level of life evaluation and her future aspired level of wealth. This study also distinguishes between two concepts that are often confounded in the literature regarding subjective wellbeing; emotional wellbeing that is sometimes called hedonic wellbeing and life evaluation that refers to an individual’s thoughts about her current level of wellbeing measured by a socioeconomic ladder. The main hypothesis of this paper is that chronic illness lowers emotional wellbeing as individuals suffering the illness feel more deprived while their aspirations gap increases over the duration of illness. The deterioration of emotional wellbeing occurs as the individuals compare their material wellbeing with that of others in their cognitive neighbourhood and with their future reference point. The empirical investigation of this paper is also in part based on a recent economic theory that underinvestment problems may occur not only as a result of a lower aspirations gap but also due to frustration that results from an excessive aspirations gap.

The results show that a one standard deviation (SD) increase in duration of illness leads to a 170% higher level of changes in the aspirations gap than the mean value of changes between 2007 and 2014. Moreover, a one SD increase in duration leads to a reduction of happiness approximately by 35% of the mean change in happiness between 2007 and 2014. Overall, results of this study suggest that chronic illness brings about a vicious cycle in which a deterioration in an individual’s current life evaluation, compared to her cognitive neighbourhood, leads to a greater aspirations gap, which, in turn, reinforces feelings of unhappiness and dissatisfaction with life. The results of this study also present empirical evidence that chronic illness may be linked to underinvestment in Indonesia as the aspirations gap increases over the duration of illness. The poor with chronic conditions may have little incentive to raise their living standards due to frustrated aspirations, although they can expect greater pecuniary returns later from their investment in children’s human capital in Indonesia. This view is supported by the additional regression results that show a greater impact of illness duration on the aspirations gap and emotional wellbeing of individuals in the bottom 25 percentile of household income, who are more vulnerable to health shocks in Indonesia.

The findings of this paper are of special interest to policy makers in that they identify non-pecuniary costs of chronic illness in terms of income inequality and intergenerational transmission of poverty in Indonesia. The findings suggest that benefits of government expenditures on healthcare may be greater when the government, with its limited resources, targets subsidies towards low-income people with long-term illnesses especially in regions where the Gini coefficient is greater. They also suggest that health care systems should be concerned not only with illness and disability, but also with supporting methods of improving psychological states over the period of illness.
“Happy Travels? Measuring travel satisfaction in Dublin”
Tuesday 13:30 (Nally).

Leonhard Lades (University College Dublin) with Liam Delaney.

Abstract:
Some trips are better than others, and more and more studies find that active travel (walking and cycling) is more satisfying than motorized forms of travel (using the car or public transport). Why is this the case? Using data on travel satisfaction from 4,134 commutes to a large University campus in Dublin, Ireland, this paper replicates the differences in travel satisfaction between active and motorized travel. We attribute these differences in large part to the duration of the trip. Subjective trip characteristics, such as safety and convenience, also play important roles. The trip duration explains rush-hour effects as well as why people starting from less affluent and more difficult-to-reach places are less satisfied with their trips. Longer-term policy options suggested by these results include infrastructure development and spatial development strategy; however, the analysis suggests a shorter-term initiative: delaying University classes in the morning and evening has the potential to offer enhanced trip satisfaction, whilst easing pressure on the transport network at peak time.
Preferences 2 (DAVIN)

“When is the strategy method appropriate? The role of emotions”

Tuesday 13:30 (DAVIN).

Elena Manzoni (University of Verona) with Giuseppe Attanasi, Pierpaolo Battigalli.

Abstract: There is a large debate in the experimental literature on the effects of adopting the strategy method instead of having the game played sequentially. The evidence on whether the sequential method of play is equivalent to the simultaneous one is mixed. The seminal work by Brandts and Charness (2011) highlights that the equivalence holds for some games and some experiments but not for others.

We propose a novel rationale to explain this phenomenon and we develop the analysis both theoretically and experimentally. We suggest that the equivalence may or may not hold in relation with the emotions that are at place in the game that is experimentally tested.

Theoretically, we model emotions in games following the approach of psychological game theory (Battigalli and Dufwenberg 2009; Battigalli, Corrao and Dufwenberg 2018).

We follow Battigalli, Corrao and Dufwenberg (2018) in the classification of emotions into mere anticipation vs. mere action tendencies. In the first case all that matters is the anticipation of psychological states (which in turn may depend on anticipatory feelings) while in the polar case experience utility does not depend on beliefs and only affects action tendencies via distortions. Examples of feelings in the category of mere anticipation are expectation-based reference-dependence, anxiety, guilt, intrinsic reputation, and regret avoidance, while in the mere action tendency category we can find frustration & anger. Reciprocity deserves a special mention in that it can be modelled as belonging to the mere anticipation category or to the mere action tendency one. In its most famous version (Dufwenberg and Kirchsteiger 2004) it belongs to this latter category.

Emotions that display mere anticipation can moreover satisfy own-plan in-dependence or not. If they do, all the standard properties of subjective expected utility hold. In particular, preferences are dynamically consistent, and randomization is superfluous. Examples of such belief-dependent preferences are guilt, intrinsic reputation and regret avoidance. We show how the dynamic consistency implied by mere anticipation and own plan independence is the key to explain the equivalence between the strategy method and the sequential method of play. This is due to the fact that the strategy method induces covert commitment which may solve potential self-control problems in the presence of dynamic in-consistency thus changing the results with respect to the sequential method of play. We devote a special attention to the issue of reciprocity, to understand whether there are game forms in which it may induce dynamic inconsistency or not.

The second step of the theoretical analysis moves from the observation that different belief-dependent preferences may have a bite in different games. For example, anger cannot play a role in games in which the second mover is not active after choices of the first mover that disappoint him and may generate anger. Therefore, we investigate the relation between the characteristics of the specific game form and the emotions that may play a role, to identify which games are more likely to induce the same behaviour across methods of play in the lab.
Finally, we test our predictions experimentally through a battery of standard games played both simultaneously and sequentially. We also elicit first and second order beliefs of players, in order to test whether the equivalence results between methods of play is indeed related to the type of belief-dependent preferences that subjects display in the experiment.

“Plasticity of human strategic sophistication in interactive decision-making”
Tuesday 13:30 (DAVIN).

Sibilla Di Guida (University of Southern Denmark) with Davide Marchiori, Luca Polonio.

Abstract:
Most human decision-making happens in interactive situations, in which the decision outcome for an agent depends upon the decision of one or more other agents. The ability of accurately guessing the other agents’ moves, commonly referred to as strategic reasoning, is therefore fundamental for obtaining better decision outcomes.

The depth of an individual’s strategic reasoning, often summarized as the level of strategic sophistication, has been shown to be stable across different interactive decision situations and strongly associated with stable individual traits such as cognitive ability. This could suggest that the level of strategic sophistication is a stable trait in individuals.

We cast doubts on this statement, testing whether and to what extent experience affects strategic sophistication. In a controlled behavioural lab experiment, we collect and analyse choice and ocular data to evaluate the effect of different kinds of repeated interactive decisions with immediate feedback on the participants’ strategic sophistication.

We show that such repeated experience can dramatically affect participants’ level of strategic sophistication, and that newly acquired strategic sophistication is generalized to cope with different, more complex interactive decisions.

Our results show that strategic sophistication is plastic, with important implications for the development of theoretical economic modelling, cognitive training schemes, and artificial intelligence.

“Child preferences and outcomes: Evidence from rural Bangladesh”
Tuesday 13:30 (DAVIN).


Abstract:
Knowing about determinants of heterogeneity in behaviour and life outcomes is essential for economists and policy makers alike. Thereby, it is widely assumed that non-cognitive skills (also) drive individual decision making among others the set of (economic) preferences such as time, risk, and social preferences which are important elements in economic frameworks. Many researchers have worked on understanding determinants and consequences of differences in non-cognitive skills. So by now, they are known to be key predictors of central life outcomes such as educational
attainment, job performance, earnings, health outcomes and participation in risky behaviours (e.g., Borghans et al., 2016; Bowles, Gintis, and Osborne, 2001; Caspi, Roberts, and Shiner, 2005; Chabris, Laibson, and Morris, 2009; Frieh and Schildberg-Hörisch, 2017, 2018; Golsteyn, Grönqvist, and Lindahl, 2013; Gutman and Schoon, 2013; Heckman, Stixrud, and Urzua, 2006; Mott et al., 2011; Sutter et al., 2013).

Yet, most literature has focused on adult decision makers in developed countries. There is not much evidence directly linking child preferences and child outcomes or field behaviour, especially not in a developing country context.

Motivated by this apparent gap, we collect data applying a united experimental framework to measure different types of preferences. Comprising 4,000 households from rural Bangladesh, our data set spans childhood, adolescence and young adulthood, basically covering the whole life period that is potentially critical for the formation of non-cognitive skills. We elicit cognitive and non-cognitive skills of up to four household members using incentivized experiments, well-established scales as well as validated questionnaires and survey items. Besides, the data set contains information on socio-demographics, income, employment, assets and expenditures as well as health, the Strengths and Difficulties Questionnaire (SDQ) as a measure of behavioural difficulties and items regarding parenting style.

With approximately 10 percent of people worldwide living in extreme poverty (2015, World Bank Press Release) and 45 percent living in rural areas (2017, World Bank Data), moving from the much studied and urbanized Western countries to rural areas in the developing world, we gain access to a highly relevant group and can compare whether the (few) established results on the correlations between child preferences and outcomes also hold here.

The households are randomly sampled across four major districts of Bangladesh and data was elicited in 2018 for more than 6,000 children aged 6 to 16 and their parents. At the core was the sequence of three financially incentivized experiments for time, risk and social preferences yielding measures for the degree of patience and time consistency, risk aversion and a typology of other-regarding preferences. The lab-in-the-field experiments took place at the families’ homes following popular experimental protocols already used in similar settings (see, e.g., Bauer, Chytilová, and Morduch, 2012; Bauer, Chytilová, and Pertold-Gebicka, 2014; Binswanger, 1980; Fehr, Bernhard, and Rockenbach, 2008). For the time preferences experiment, children had to choose between smaller, sooner rewards and larger, later rewards in three decision sets. To elicit risk preferences, children had to choose between six different gambles where for each subsequent gamble the expected value increased jointly with the variance. In the social preferences task, children had to make four allocation choices dividing stars between themselves and anonymous children of same gender and roughly the same age.

Results indeed suggest correlations between preferences and multiple outcome measures. We ran OLS regressions for all outcomes plus (ordered) logit and probit models for binary/categorical outcomes variables controlling for an array of socio-demographic characteristics as well as cognitive ability. Risk preferences are predictive of risky behaviours elicited through a range of questions developed for the special cultural context of Bangladesh. Social preferences map into pro-sociality and indicators of behavioural problems in general, as stated by mothers about their children when answering the SDQ. In particular, children being altruistic, egalitarian or selfish contrary to being
spiteful exhibit more prosocial behaviours and have less behavioural problems. Making time consistent choices is correlated with children's study attitude and a tendency to show less behavioural issues.

No link could be established between time preferences and time-related outcomes as well as between any preference measure and health outcomes such as recent illness or BMI.

Besides providing cutting-edge descriptive evidence, we seek to further refine our understanding of the relationship between preferences and field behaviour by looking at potential channels and mediators. We explore whether the parenting styles that the children have been raised under are related to non-cognitive skills and/or field behaviour as it has been suggested that parenting is associated with both (see, e.g., Cobb-Clark, Salamanca, and Zhu, 2018; Doepke and Zilibotti, 2017).

In assessing the variety and effects of children's (non-cognitive) skills in a developing country context, we gain knowledge about a vulnerable and policy relevant group that else often remains invisible. We contribute notably to the comprehension of individual decision making and its consequences at a stage sensitive for support.

"Better the devil you don't know than the devil you know: Ambiguity preference in the negative domain"

Tuesday 13:30 (DAVIN).

Liema Davidovich (Ruppin Academic Center) with Yassour Joseph.

Abstract:
The purpose of this paper is to examine in an experimental setting the attitudes toward ambiguity over probabilities and over outcomes in the positive and negative domains, using a mixed design of within-subjects and between-subjects. Ambiguity refers to uncertain situations where the probability of the possible events is unknown. One can distinguish between two sources of ambiguity: ambiguity over outcomes and ambiguity over probabilities. Ellsberg (1961) has shown that people present aversion to ambiguity, when faced with positive rewards. Recent research shows, however, contradicting results.

Similar to Prospect Theory were people prefer uncertainty over certainty in the negative domain we found that in the negative domain people prefer ambiguity over clarity. We assume that, sometimes, when people make decisions concerning negative outcomes, they would prefer to be more ignorant.
“What percent?” versus ‘How many out of 100’: A Comparison of reported likelihoods”

Tuesday 13:30 (SUITE 679).

David Comerford (University of Stirling).

Abstract:
Survey measures of subjective likelihoods are useful for predicting individual behaviour and forecasting global events; as such, they play an important role in economic decision making. The standard approach to asking people the likelihood of an event occurring is to ask for a percentage chance. Here I expand on recent research that experimented with asking people by a frequentist approach. I ask soccer fans to estimate the likelihood that soccer matches will end in a draw, either by the percentage chance procedure or by asking them “if the match were played 100 times, how many times would it end in a draw”. The results show that the two procedures deliver very similar response rates, likelihoods and are similarly noisy. Notwithstanding these similarities, there is evidence that the two procedures call to mind different information. This latter result is consistent with research showing that people are more sensitive to base rates when using information expressed in frequencies than when using information expressed in percentages. I conclude that the frequentist approach has potential to be used in survey measurement of subjective likelihoods.

“Relative thinking with substitute goods: Does it exist with real choices?”

Tuesday 13:30 (SUITE 679).

Ofer Azar (Ben-Gurion University of the Negev and Laboratory of Economic Behavior of the Center of Psycho-Economic Research, Povolzhsky Institute of Administration named after P.A. Stolypin - branch of RANEPA).

Abstract:
This paper examines whether in the context of product differentiation people exhibit “relative thinking,” being affected by relative price differences even when only absolute price differences are relevant. Because people compare prices of alternative goods and services all the time, if they do it in a way that deviates from the traditional assumptions in economics, this has important implications for economic theory. In addition to implications for consumer behaviour and decision making, this topic also has implications for firm decisions regarding advertising, marketing, pricing, etc.

Subjects were asked to indicate for 11 different pairs of goods, given the price of one good, what is the maximal price of the other good for which they prefer the latter. These decisions were incentivized.

Subjects received different prices for the same good. The idea was that if subjects exhibit relative thinking, then those who receive a higher good’s price will also be willing to pay more (or require a higher discount) for the constant quality difference between the goods. In addition, two treatments were applied regarding the reference good. In the willingness to pay (WTP) treatment, the low-
quality good price was provided and the subject indicated the high-quality good price that makes him indifferent between the two. In the willingness to accept (WTA) treatment, the high-quality good price was provided and the subject indicated the low-quality good price that makes him indifferent.

The results were surprising: In the WTP version, no relative thinking was detected, but in the WTA version relative thinking was documented in all cases. The suggested explanation for the results is that people are affected by two biases:

1. Relative thinking. People are willing to pay more for a constant improvement in quality when the product’s price is higher because they consider the price difference also in percentage of the price and not only look at its absolute value. This is stronger when the goods are more similar.

2. A prominence bias. Subjects focus on the value of the product they are pricing although what matters is the difference in value between the two goods. Instead of answering to themselves a hard question, “how much more is it worth to have the high-quality good rather than the low-quality good?” they respond to an easier (but incorrect in this framework) question, “how much is good X worth?”

The prominence bias goes in opposite direction to relative thinking in the WTP version, and in the same direction to relative thinking in the WTA version. Consequently, when the subject is affected simultaneously by both biases (and assuming that relative thinking is stronger when the goods are more similar), this can explain the pattern of the results.

This study provides the first illustration of this prominence bias, the first illustration of relative thinking with real choices, and is among the first studies of relative thinking in the case of substitute goods.

“Weak rank dependent utility and risk tradeoffs in virtual gain-loss state space”

Tuesday 13:30 (SUITE 679).

G.Charles-Cadogan (University of Leicester).

Abstract:
The Weak Rank Dependent Utility (WRDU) model (Charles-Cadogan, 2016) splits a choice set into a virtual gain-loss state space with dynamic reference points. With one parameter extra compared to expected utility theory (EUT), it generates inner (stochastic) and outer (deterministic) measures of a virtual loss aversion (VLA) index (and its sample paths) based on trade-offs in risk. We construct a risk trade-off matrix operator with VLA indexes, and apply WRDU to Holt-Laury (2002) (HL) multiple price list experiment data for safe lottery A, and risky lottery B, to resolve the multiple switching anomaly in decision makers (DMs) choices between the lottery pairs in that popular risk elicitation scheme. As dynamic reference points run through the data, DMs switch when the VLA index associated with a bet in one of the lotteries is greater than the VLA index for another bet within the same lottery or between the other lottery. Most switching behaviour occurs in the risk neutral zone induced by the lottery pair and during risk seeking, and the least amount of switching occurs for stochastic measures of VLA. The risk trade-off operator generates low frequency waves for risk perception in safe A, and higher frequency waves for risk perception in risky B. It is asymptotically
stable in steady state, as no switching occurs within safe A, and only one switch occurs in phase transition between safe A to risky B as predicted by theory. We find that multiple switching anomalies in the Holt-Laury MPL is caused by violation of second order stochastic dominance in lottery design.

“Behaviour and beliefs in long-distance interactive online experiments between Russian cities”
Tuesday 13:30 (SUITE 679).

Alexis Belianin (BELab NRU HSE) with Gregory Chernov, Heike Hennig-Schmidt, Olga Kuznetsova, Marina Ryzhkova, Gari Walkowitz.

Abstract:
In this project, we report on a study on how preferences on cooperation are distributed over three regionally distinct subject pools in Russia: Moscow (Central region), Samara (Volga region) and Tomsk (Western Siberia). Russia is a large and diverse country, and not much is known about interregional differences, especially those reflected in behaviour. It may be, for instance, that idiosyncratic social norms existing within a region, related to fairness, equity, reciprocity or competition would differ from those in another region. Existence of such differences (if any), even among ethnic Russians, would predetermine interregional economic and civic relations, and the development of the respective social institutions.

The research questions we aim to answer in our study are whether (i) behavioural measures of cooperation differ across geographically separated regions in Russia; whether (ii) these differences are driven by preferences or beliefs about the behaviour of the other party of social interaction, and (iii) whether the detected preferences and beliefs differ in interactions between participants from one Russian region and interactions with the participants from different Russian regions. Specifically, we study the behavioural determinants by means of a laboratory experiment that involves a monetary trade-off between self-serving and other-regarding behaviour. We also elicited incentivised first-order belief data on the interacting partners’ choices, both within and between regions (Goerg et al. 2016). Further, we collected questionnaire data on personal characteristics and self-reported attitudes towards risk, trust, and life satisfaction. Our experimental study is the first one that analyses not only within-regional interactions but also interregional exchanges in real time using broadband internet connection (see for a similar approach Grimalda et al. 2018, Weimann et al. 2018). These features of our study are the major novel (methodological) contributions to the literature.

The workhorse we use to study our research questions is the Ultimatum game (UG) developed by Güth et. al (1982). A Sender S is endowed by the experimenter with a pie she can divide between herself and a R(esponder). R can accept or reject the offer. In the former case both S and R get the amounts proposed, in the latter case S and R leave empty-handed. Even though the game structure is easy (two players, two stages, complete information), the motivations behind decisions in the ultimatum game can be diverse, for instance, different aversion concepts, intrinsic motivations, other-regarding preferences, or emotions (Güth and Kocher, 2014).

We chose Moscow, Tomsk and Samara, as these cities are different in geographical locations, regional per-capita income, and number of inhabitants that might give rise to behavioural
differences and expectations. The UG was played in a between-subject 2x3x3 design in that each Sender made three consecutive decisions by interacting three times with the same Responder from his own city or from one of the other two cities. The same holds for Responders. Only one decision was randomly chosen for payment. Sessions were run from April to November 2018. We invited students as participants as is common in most economic experiments. Altogether 302 students participated (151 Senders and Responders each): 102 from Moscow, 105 from Tomsk and 95 from Samara. We thus base our analysis on 906 decisions in total. Each session lasted about 80 min. The experiment was programmed in oTree (Chen et al., 2016).

A first analysis provides interesting insights concerning Senders’ offers, Responders’ minimal acceptance levels, Responders’ expectations on Senders’ offers as well as regarding failing transactions. We found that Senders from Tomsk are more generous to aliens, esp. from Moscow, than to their city mates (Result 1). Muscovite Senders offer significantly lower shares of the pie to fellow-city Responders than Samara and Tomsk Senders offer to their respective within-city Responders (Result 2). The level of offers Muscovite Responders demand from Tomsk and Samara Senders to accept a transaction is significantly higher than the minimal offer they demand from their fellow-city Senders – this especially holds towards Samara (Result 3). While we find no overall and between-cities differences in Responders expectations on Senders’ offers (Result 4), Tomsk Senders are more generous to Responders of other cities than these Responders expect (Result 5). Finally we find no significant differences in failure rates across treatments (Result 6). Further analyses will dig deeper into the connections between behaviour, expectations and personal characteristics as well as attitudes.
Social behaviour 5 (SUITE 688)

“Economic socialization index as a tool for predicting destructive economic behavior”
Tuesday 13:30 (SUITE 688).

Alena Obolenskaya (Ural State Pedagogical University) with Olga Kruzhkova.

Abstract:
The people’s economic behavior is also changing soon, as our whole life is changing: the material and cultural environment, the geopolitical situation, technological progress and markets. With the advent of digitalization in all spheres of life, the usual and routine physical work, the logistical efforts that before, are no longer required. Now many transactions are assigned to bots. Bots make regular payments, write letters and replies to them, and keep records in general. So, in Russia it is already possible not to hire a lawyer in the organization’s staff, but to install software for preparing claims against suppliers and borrowers. At the New York airport, there is no need for an employee to check in passengers - a camera is installed that recognizes faces, and the program checks that the passport photo matches. In Montreal, the car performs the functions of a border guard. In Novosibirsk city the robot delivers drugs in a pharmacy. Household daily affairs are replaced by appliances: washing machines are washed, dried and ironed a little, multicookers are prepared by wifi, dishwashers are washed and dry dishes are made, the robot vacuum cleaner cleans. No need to go for a ticket or to the bank - all online. Many public services are also online. Training is increasingly online. Shopping also online.

Reinhard Zelten experimentally proved (1990) that the decision made by the individual does not necessarily correspond to the most complete set of factors that he used when choosing a solution, i.e. The final decision can be made with disregard for the assessment methods used and rely on more primitive means, for example, just a habit.

All ratio less there is no need for physical support for survival - the state and relatives and technologies give a minimum. The less traditional the behavior, the greater the likelihood of high earnings, for example, our respondents think online.

Ratio: earned spent on healthy food, sports (free runs, streetwalking free), disease prevention, timely visits to the doctor, investing, calculation of profitability from loans and credits. Non-dopamine behavior, dopamine-independent behavior is possible only for the robot, but not for humans. Man is irrational! Even the one that tries, the one who plans. But not everyone is planning, and using self-damaging behavior, addictive behavior, and infantile behavior.

Researched features of economic behavior. Typologized it. They asked for a rationale or possible targets, intended results.

• So persons do not apply investment, they have no money. They are never. Even on the day of the unexpected prize / winnings, they do not invest, but reward themselves.
• Spend rationally.
• Distribute time unevenly. Bear the opportunity costs, payback is not obvious, or obviously negative.
So, destructive behavior can be expressed in manifestation of vandal activity with damage to the urban environment, private property, and at the same time causing damage to its financial position, since vandalism provides for a high fine in Russia up to $ 615.

Firstly, is vandalism relatively deviation of behavior?

So, from the point of view of a number of researchers, vandalism is deviant behavior aimed at a baseless destruction of material and spiritual values, and spoiling the property in public places. Vandalism is dysfunctional, because it disorganizes the social system, violates public order and undermines the values of society and the institution of property. It can be as an additional act or the initial stage of more serious crimes, such as pogroms, robbery, causing substantial damage to a public or private property. For the criminal-oriented youth, vandalism can be a form of leisure along with the use of drugs, alcohol and sexual relations. At the same time, J. Van Ouytsel, K. Ponnet and M. Walrave say that teenagers who commit vandalism are themselves at increased risk of becoming victims of violent crimes, aggression from people who are dissatisfied with their actions. That’s why it is so important to measure how young people understand the economic consequences of their behavior.

Based on surveys in several Russian megacities in 2019, we formulated the IESOK index (Index Economic Socialization of Obolenskaya, Kruzhkova), which includes awareness, activity in solving life problems, attitudes towards wealth and poverty and their root causes in a particular person’s life.

The index is calculated on the basis of a survey of 2007 young people aged 20 to 35 years in seven biggest Russian megapolises, with a view to their understanding of how their actions affect their quality of life.

Also, the designated index by the method of valuable substitutions was correlated with other private indices — Well-being index, Comfort index of the place of residence, Index of general life satisfaction, Index of perceived well-being. On the basis of this comparison, we identified the strongest influence of the IESOK index of economic socialization.

The general well-being of young Russians in a megacity with the help of calculated partial indices can be expressed through a deterministic model.

$$\Sigma IQLRM = \Delta IQLRM (ICPRM) + \Delta IQLRM (ILSRM) + \Delta IQLRM (IWBRM) + \Delta IQLRM (IESOKRM),$$

$$\Sigma IQLRM – \text{Index Quality life Russian Megapolis}$$

$$ICPRM - \text{Index Comfort residence Place Russian Megapolis}$$

$$ILSRM - \text{Index Life Satisfaction Russian Megapolis}$$

$$IWBRM - \text{Index Well-being Russian Megapolis}$$

$$IESOKRM - \text{Index Economic Socialization of Obolenskaya, Kruzhkova Russian Megapolis}.$$ 

So, the main positions of the index can be used in developing programs for the development of social infrastructure in the territory (in Russia, the authorities have actively begun work on the financial literacy of the population), as well as in the work of marketing services of enterprise.
**“Enough is not enough: Dispositional greed, work, and overearning”**

*Marcel Zeelenberg (Tilburg University & VU Amsterdam) with Seger M. Breugelmans, Terri G. Seuntjens, Niels van de Ven.*

Abstract:
Overearning is the tendency to forgo leisure and earn more than one needs. Despite the important consequences of overearning for well-being and the environment, little is known about who overearns and why. We examined the role that dispositional greed plays in overearning. Study 1, an incentivized lab study (N = 153), found that greedy individuals showed overearn more than less greedy individuals. A follow-up survey (N = 297) suggests that greedy people overearn more because they find the pursuit of wealth more important, not because they find the labour less aversive. Consistent with this notion is that Study 2 (N = 472), finds that greedy people value money more than time, a pattern associated with lower well-being. Finally, Study 3, another incentivized lab study with two measurement moments (Ntime-1 = 185; Ntime-2 = 133), replicated and extended the findings of Study 1. People do seem to learn from overearning in the past, as overearning is reduced at time 2. However, even at time 2, overearning exists, and greedy people still earn more than the need. Implications for well-being are discussed providing insights in what we can do to prevent overearning and increase well-being.

**“The impact of personal reward on the economic value of moral judgment”**

*Reut Blaywais (Ben Gurion University of the Negev, Israel) with Uriel Haran, Mosi Rosenboim.*

Abstract:
The purpose of this study is to examine moral judgment towards a person who behaves immorally and the willingness to exercise economic punishment against him. By using the method of rolling a cube and self-reporting on the result, the study examined the effect of personal rewards on the judges, as a function of the perceived motive for the behaviour. The study showed that when people benefit from someone else's inappropriate behaviour, they do not judge it theoretically as less immoral, but, practically, in terms of the economic value of moral judgment, people have expressed more leniency in the immoral act when they themselves have also been rewarded. The degree of personal morality moderates this phenomenon.

The present study examined the investor's perspective of moral judgment towards another and focuses on an act of lying, when the benefit of the lie is personal only (beneficial to the liar), social benefit only (beneficial to the judge) or mutual benefit (beneficial both to the liar and to the judge). Another contribution of this study is an examination of the actual behaviour of the judge (and not only an evaluation of the immoral behaviour at the theoretical level). This study will measure the judge's willingness to punish the liar financially and his willingness to be financially harmed himself.

The research hypothesis is that moral judgment and the degree of economic punishment will be less severe when the individual is rewarded by the immoral act, especially when the benefit from the immoral act is purely prosocial.
The experiment employed a 4-group between subject’s design, with a random condition assignment. In each group, participants were told that in the previous round of the experiment another anonymous participant (randomly assigned to them) was asked to roll a computerized virtual cube and report the result that would determine the monetary payment at the end of the experiment. Participants were also told that the student from the previous round had given a false report. In each of the experimental groups the participants will be exposed to a different manipulation of their personal reward as a result of the lie of the other (no reward / with reward) and the former participant’s motivation to lie (mutual benefit / personal benefit / prosocial benefit).

The participants were asked to answer questions to examine the dependent variables in the study: how much do you think the participant’s behaviour from the previous round was moral, how much do you think he is generous and how much you think the participant from the previous round had good intentions. In addition, the participants were asked how much they would suggest that the experimenter would pay the participant from the previous round in light of the information provided to them about his behaviour (This question was asked only in groups where the dice thrower would receive a monetary reward) and how much they think they deserve for their participation from the experimenter in light of everything presented to them (This question was asked only in groups where the current participant would receive a monetary reward). Participants also were told that their answer to this question would determine the payment they would receive if they won the lottery (except for the first group participants who receive a fixed amount according to the scenario). The winners’ lottery will be held at random regardless of the selection made in this section.

Moreover, participants in all groups were asked to answer the Personal Morality Item questionnaire drawn from the International Personality Item Pool (IPIP) (Goldberg, 1999) to examine whether personal morality is a moderating variable. Participants responded to 12 statements about themselves, for examples: “I would never cheat on my taxes”, on a Likert scale of 1 to 7 (1 = very inaccurate, 7 = very accurate).

The findings show that when people benefit from someone else’s inappropriate behaviour, they tend to judge her theoretically as more generous and well-intentioned (especially when the benefit is prosocial), but not necessarily as more moral. Nevertheless, in terms of actual behaviour, people tend to punish less a person who behaved immorally when they themselves are rewarded from the same act and even less willing to hurt financially themselves. The degree of personal morality moderates this phenomenon.

The hypothesis that judgment will be less severe when the judge himself is compensated for the lie is partially confirmed. In terms of the concept of lying as a generous act or as a good intention, the hypothesis is confirmed. When the person who lied consciously did so for the benefit of the other, the act was perceived as more positive, especially when that person was not rewarded at all, that is, a situation of prosocial benefit. However, in all experimental groups, theoretically the act was treated equally as immoral. As in previous studies, it is important for people to maintain their self-image as moral persons, even towards themselves, and this may be the reason for the lack of differences (Mazar, Amir & Ariely, 2008). In contrast, when it comes to actual behaviour people have expressed more leniency in the immoral act when they themselves have also been rewarded. Moreover, even though they punished financially the unethical man in their opinion, they were not willing to hurt themselves financially. According to literature, people are more susceptible to financial losses (Tversky & Kahneman, 1981) and even though they fined the liar and claimed that his
act is immoral, they are not willing to harm themselves and give up the money they deserve as a result of a false act. However, it should be noted that they did not ask for the maximum amount (NIS 60) or the amount that was reported (NIS 50). This finding is also consistent with the literature that shows that people limit themselves to reporting / asking for the maximum amount even though they have the possibility (Fischbacher & Heusi, 2008; Shalvi, Handgraaf, & De Dreu, 2011).

The resulting moderation effect indicates that the level of personal morality affects judgment. People with low self-morality judged the lie more forgivingly, whether they were rewarded or not. People with higher morals judged the lie more indulgently only when they were rewarded.

"Market mindset increases utilitarian moral choices"

Tuesday 13:30 (SUITE 688).

Tomasz Zaleśkiewicz (SWPS University of Social Sciences and Humanities) with Agata Gąsiorowska, Przemyslaw Korotusz, Anna Kuzminska, Pawel Tomczak.

Abstract:
The contemporary world we are a part of might be characterized by increasing prevalence of market-like practices and by growing tendency to perceive social relations through the market-oriented lenses. In other words, more often and easier than it was before, people tend to define and construe relationships they engage in as if they represented business or trade. This tendency is visible not only for relations with strangers but also with close others. For example, prior ethnographic field research showed that some people use business-like practices to regulate daily lives of their families, for example by creating homemade accounting and budgeting spreadsheets, not only to provide reasonable family budgeting, but especially to keep track of each spouse’s input to a common stake.

In the present paper, we show that the prevalence of market mentality has also impact on peoples’ moral choices. We report results of three experimental studies consistently indicating that people employ more utilitarian or consequential decision-making strategy while solving moral dilemmas when they are reminded of market relations. We suggest that such a shift towards utilitarianism in moral reasoning results from the fact that thinking consistently with the market mindset is based on proportionality directed towards calculating and acting in accord with ratios and cost/benefit analyses. Alan Fiske proposes in his relational models theory that the core element and, at the same time, the main moral motive within market relationships (named market pricing in his model) is proportionality “directed toward calculating and acting in accord with ratios or rates for otherwise distinct goods to ensure that rewards or punishments for each party are proportional to their costs, contributions, effort, merit, or guilt” (Rai & Fiske, 2011, p. 64). Assuming that the tension between utilitarian and deontological moral decision making reflects the distinction between calculating which choice maximizes the overall good on one hand and behaving with regard to a general rule irrespective of consequences on the other, we might predict that activating the market mindset that promotes proportional thinking will be supportive for the utilitarian philosophy.

In all three experiments we used a novel, original method to activate the market mindset that has not been previously employed in experimental research. In this method participants are presented with pictures exhibiting different types of social relations and are asked to answer several related
questions. In Experiment 1 we used two classical moral dilemmas, i.e. the trolley dilemma and the bridge dilemma that have extensively been employed to investigate people’s moral judgment and decision making. In both dilemmas people may decide whether to kill one individual in order to save lives of five others. Choices to kill one individual are coded as utilitarian, and choices to refrain from acting and letting five individuals die are coded as deontological. We showed that those participants who were earlier primed with the market mindset (compared to those primed with the communal mindset and controls) were more prone to make utilitarian moral choices irrespective of the dilemma (i.e. the exposure to market relationships led to more utilitarian choices in both impersonal trolley dilemma and in personal bridge dilemma). In Experiment 2 we further demonstrated that thinking in terms of the market mindset leads to utilitarian decisions using a scenario that was formally based on the trolley dilemma, but referred to a different, more real-life domain. We also primed some participants with the market mindset and experimentally manipulated the ratio between numbers representing how many people will survive and how many people will die to provide further support for the thesis that people exposed to market relations (but not those in the non-market mindset) are more sensitive to the proportions present in moral dilemmas. The results of this experiment showed that people primed with the market mindset not only made utilitarian moral choices more often (compared to other groups exposed to non-market relationships) but their willingness to make such choices increased with the ratio between numbers representing how many will survive and how many will be killed. Finally, in Experiment 3 we found that priming people with the market mindset lead to more utilitarian choices but only when the number of potential deaths and saved lives was clearly specified (compared to the condition, in which numbers of victims were unspecified). This is because the market mindset is closely associated with proportional thinking, which relies on multiplicative relationships between numbers and its effect on moral choices disappears when information about the number of potential victims is only vaguely provided.

Relational Models Theory (Fiske, 1991, 2004) postulates that market mindset that is activated when people engage in market relationships promotes thinking with reference to ratios and cost/benefit analyses. This theory also proposes that the core moral motive in market relations is proportionality. In the present project we examined the hypothesis that when people’s thinking is determined by market mindset, they tend to endorse utilitarian moral reasoning and, as a consequence, make more utilitarian choices while solving moral dilemmas. Such a hypothesis is consistent with theorizing suggested earlier by Fiske that Market Pricing involves evaluating the aggregate welfare in terms of the greatest good for the greatest number. What is more, we proposed that even merely exposing people to market relationships is enough to have a positive effect on the endorsement of utilitarian choices, because activating the market mindset evokes thinking based on ratios. We carried out a series of three experiments whose results completely supported our theoretical predictions.
Consumption (SUITE 687)

“Stop the music? The effect of music on risky financial decisions: An experimental study”
Tuesday 13:30 (SUITE 687).

Eyal Lahav (College of Management Academic Studies. Israel) with Avi Israel, Naomi Ziv.

Abstract:
Decision-making processes can be influenced by situational factors, affecting risk taking. Background music, which is present in many everyday situations, has been shown to affect cognitive processes by influencing arousal and mood. The aim of the present study was to examine the possible effect of high- and low-arousal music on decision making in the context of financial investments, focusing on two tasks: a lottery-type task and a portfolio-diversification task.

To choose musical pieces for the main study, we ran a pre-test with 63 participants (Mage = 27.23 years, SD = 4.84; 60% females) who did not take part in the main study. Participants were recruited through social networks. Twenty instrumental musical pieces of different styles (e.g., classical, jazz, electronic) were chosen, with one more energetic and upbeat piece and one slow-tempo piece in each style. On the basis of participants’ replies, the two pieces of the same style with the highest ratings as calming and arousing were identified.

Three hundred sixty-seven participants took part in the main study (Mage = 27.1 years; 53% females). Participants were undergraduate students in business administration, at the college of management academic studies in Israel. Participants were randomly assigned to three groups: 117 to the high-tempo arousing music group (hereafter: fast-tempo group; Mage = 27.6 years; 57% females), 125 to the low-tempo calming music group (hereafter: slow-tempo group; Mage = 27.3 years; 53% females), and 125 to a no-music control group (Mage = 26.4 years; 50% females). The participants were asked to make investment decisions while either high-tempo music, low-tempo music, or no music was played in the background.

On the lottery-type task, low-tempo music led to more risky decisions (i.e., more investment in risky assets) than high-tempo or no music. On the portfolio-diversification task, low-tempo music led to more risky decisions (i.e., less diversification) than high-tempo music, and there are some indications for the use of 1/n heuristic. Moreover, on both tasks, participants who subjectively perceived the music as helpful made riskier decisions. Results are discussed with regard to gender differences and previous findings.

“Field experiments in restaurants: The effects of music”
Tuesday 13:30 (SUITE 687).

Merav Malcman (Ben-Gurion University) with Ofer Azar, Mosi Rosenboim, Tal Shavit.

Abstract:
Music has a potential influence on customers’ behaviour and decision-making. Background music affects behaviour in a variety of ways, and previous research has tried to understand how people react in everyday commercial environments (e.g. restaurants, markets, wine store, etc.), and which
emotions are involved in each situation (Milliman, 1986; Wilson, 2003). Moreover, the effect of music depends on the nature of the task and the type of music playing in the background.

Many terms are used to describe music; three basic factors are time, pitch and texture (Bruner, 1990). Time includes, inter alia, rhythm (the pattern of accents given to beats or notes in a song) and tempo (the speed or rate at which a rhythm progresses). Pitch includes the melody and mode of the music. Melody is the succession of notes occurring over time throughout a song. Changes in melody can be either ascending (rising in pitch) or descending (dropping in pitch). Mode refers to the series of notes, arranged in a scale of ascending pitch that provides the tonal substance of a song. The best-known modes are the major and the minor modes. The texture of music refers to its timbre and volume. Timbre describes the distinctive tone that makes one instrument sound different from another even if they are both playing the same melody at the same pitch. Volume also contributes to the texture of music; for example, by making one note louder than others around it.

The literature suggests that tempo is one of the most important determinants of human response to music. Milliman (1986) showed the effect of music tempo on the behavior of restaurant patrons. When slow music was playing, customers spent significantly more time in the restaurant and more money on alcoholic beverages. Caldwell & Hibbert (1999) also found that with a slow tempo, patrons spent significantly more time on dining; although there was a clear trend towards higher spending in their slow tempo group, the amount spent on food, not only beverages, was also significant.

Tempo is strongly correlated with arousal. Fast music has been shown to raise listeners’ self-reported arousal levels (Knoferle, Spangenberg, Herrmann, & Landwehr, 2012). Tempo also effects time perception (Caldwell & Hibbert, 1999; Knoferle et al., 2012; Milliman, 1986) so diners in the slow tempo condition may underestimate time spent in the restaurant. We will use the musical tempo as an independent variable to report its influence on the tip size and accordingly the hypothesis is:

When the tempo (speed) of the music is slow, patrons spend more time dining and their pleasure is positively aroused, hence the tip size will be higher.

Two additional music effects that could have an impact on tip size are the mode and genre, thus suggesting that future research should address and include such variables. The most important gauges of the mode effect are the major and minor. In Western music, the major and minor modes are known to be strong indicators of positive and negative affective emotional value (Gagnon & Peretz, 2003; Knoferle et al., 2012). Husain, Thompson, & Schellenberg (2002) show that people who heard music in a major mode became more positive in their mood, whereas the minor mode caused negative shifts in mood. Furthermore, research has found a correlation between mood and customer behaviour, so that the major mode leading to a positive mood caused increased sales (Robert & John, 1982). Musical genre also has an effect on purchase intentions. Areni & Kim (1993) show that classical music led customers to purchase more expensive wine. The literature shows that jazz stimulated more pleasant flavour perceptions and overall positive impression of food stimuli than hip-hop (Fiegel, Meullenet, Harrington, Humble, & Seo, 2014). However, certain genres are not conducive to the positive ambiance of a restaurant, as a result it is not possible to examine their influence on tip size.

In this study, the experiment is conducted without prior knowledge of patrons’ music preferences. The research question in this study is what are the effects of music tempo on tipping?
Experimental Design & Methods
The two tempo conditions were created based on the criteria used by Milliman (1986) and reused by Caldwell & Hibbert (1999) in their research: music with 94 or more beats per minute was used for the fast tempo condition, while music with 72 or fewer beats per minute was used for the slow tempo condition. The manipulation will be to play music with a fast tempo, denoted FT (fast tempo), or with a slow tempo, denoted ST (slow tempo). The volume of the music will remain consistent throughout all manipulations.

The tempo will be randomly assigned on different days of the week, and reversed the following week. In the control group, the music will be the regular music played at the restaurant. The playlist will be a combination of female and male vocalists, both well-known popular artists and lesser known, less popular ones. The music (songs) for all manipulations will be chosen by a company that specializes in playlists for background music in restaurants, and with whom the restaurant has an ongoing contract.

Previous research has been limited to measuring the effect of music on the amount of the final bill. This study will not only serve as an extension and replication of this literature, but will also add an analysis of the impact of music on the tip amount, something that has not been done previously.

“Effects of asymmetric expectation disconfirmation and evaluability of mobile phone attributes on consumer satisfaction”
Tuesday 13:30 (SUITE 687).

Gerrit Antonides (Wageningen University) with Lies Hovestadt.

Abstract:
Consumer satisfaction is an important determinant of consumer loyalty to a company (Chan, 2003). Hence, the determinants of consumer satisfaction are an important study topic. Several theories have been employed earlier to study consumer satisfaction. Here, we take a different approach by focusing on both expectation disconfirmation theory (Oliver, 1996) and evaluability theory (Hsee & Zhang, 2010).

It is well known from prospect theory that losses (e.g., price increases) influence consumer evaluations of a product more negatively than comparable gains have a positive influence (e.g., price decreases) (see, for example, Putler, 1992; Yan & Bao, 2018; Hardie et al., 1993). The same may be true for other product attributes that either negatively or positively disconfirm consumer expectations about these attributes (Neumann & Bockenholt, 2014).

From general evaluability theory (Hsee & Zhang, 2010) it is known that isolated product evaluation after acquisition may be based more on easy- than on difficult-to-evaluate product attributes, whereas before acquisition product evaluation may be based more on difficult-than easy-to-evaluate product attributes. The difficulty of evaluability has been defined as “the extent to which a person has relevant reference information to gauge the desirability of target values and map them onto evaluation” (Hsee & Zhang, 2010). Although evaluability theory is not directly compatible with expectancy-disconfirmation theory, we study the effects of disconfirmation of expectations on consumer satisfaction for both easy-to-evaluate and difficult-to-evaluate attributes. Furthermore, we expect that the effects of asymmetric evaluation of disconfirmation on consumer satisfaction

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(implying different effects of positive and negative disconfirmation) are different for easy-to-evaluate attributes than for difficult-to-evaluate attributes, although the direction of the difference is not clear theoretically.

We have conducted an Internet-based consumer survey among 205 owners of either newly purchased (recruited via snowball sampling) or refurbished mobile phones (customers of one Dutch company) concerning expectation disconfirmation for a number of mobile phone attributes. The survey measured satisfaction with the mobile phone by two items adapted from Brown (2010). Disconfirmation was measured by comparing retrospective expectations with current performance of nine mobile phone attributes in two different ways: (1) direct questions asked whether the mobile phone performed better, the same or worse than expected on a 7-point scale; (2) indirect questions asked about both expectations consumers had with regard to the mobile phone attributes before acquisition (on a 7-point scale), and current performance regarding the attributes (on a 7-point scale). From the answers to the indirect questions, expectation disconfirmation was calculated by subtracting expectation answers from performance answers. The attributes questioned in the survey comprised price, features of the phone, battery, capacity, design, availability, warranty, durability, and service. Furthermore, the survey asked whether consumers thought evaluating the different aspects was difficult or easy (on a 7-point scale). Finally, information was provided on gender, education, and age of the respondents, price of the mobile phone, and period of ownership (maximally 2 years).

For some attributes, the amount of missing information was substantial. For example, the direct questions on difficult-to-evaluate attributes yielded 12–20 missing values; the easy-to-evaluate attributes yielded less than 5 missing observations. We imputed the missing observations by estimating their values from regressions of the valid observations on all other variables in the relevant equations, and then checked if the imputed observations had the same effect on satisfaction as the valid observations, which was actually the case (a joint test for different effects on satisfaction of observed and imputed values for all attributes yielded F(8, 172)=1.66, n.s.). We also compared the results for imputed missing values with a “listwise deletion” of missing values and found essentially similar results.

Principal-component analysis of difficulty-of-evaluation scores yielded two factors which could be interpreted as easy-to-evaluate and difficult-to-evaluate, respectively, because the average reported difficulty of evaluation was consistently higher for items corresponding with the difficult-to-evaluate factor (availability, warranty, durability, and service) than for the other items.

Next, we conducted several regression analyses of satisfaction on perceived performance, positive/negative disconfirmation, and evaluability, for information from both the direct questions and the indirect questions. The average perceived performance of easy-to-evaluate attributes had a larger effect on satisfaction than difficult-to-evaluate attributes for new phone owners (F(1, 103)=4.11, p<.05) but not for refurbished phone owners (F(1, 77)=0.86, n.s.). The average coefficient for all single easy-to-evaluate attributes was higher than the average coefficient for all single difficult-to-evaluate attributes for refurbished phone owners (F(1,71)=34.42, p<.001) but not for new phone owners. These results were partly in line with the evaluability hypothesis on consumer satisfaction.
The average disconfirmation scores on the direct questions concerning the attributes could be either positive, negative, or zero. We estimated their effects on satisfaction separately for easy- and difficult-to-evaluate attributes for all phone owners in the sample using Bonferroni-adjusted p-values. We found a larger effect for negative disconfirmation than for positive disconfirmation (F(1, 185)=14.42, p<.001). The other effects were not significant. Also, we tested the disconfirmation scores for all nine attributes in the regression separately and testing for equality of the average coefficients for positive and negative disconfirmation for both easy-to-evaluate and difficult-to-evaluate attributes. We only found a significant difference between the average coefficients of positive and negative disconfirmation for difficult-to-evaluate attributes (F(1, 171)=5.78, p<.05). The other effects were not significant. The adjusted R2s of the regressions were above 0.50.

Similar results were obtained with the indirect disconfirmation scores that were calculated from separate questions on expectations and current performance concerning the attributes. However, the adjusted R2s of the regressions were substantially lower than those obtained with the direct disconfirmation questions (above 0.35).

As a conclusion, we found much stronger effects of negative attribute performance disconfirmation on satisfaction than of positive disconfirmation, generally for difficult-to-evaluate attributes but not for easy-to-evaluate attributes.

“Commodity choice analysis: Time and distance influence”
Tuesday 13:30 (SUITE 687).

Katarina Kostelić (Juraj Dobrila University of Pula, Faculty of Economics and Tourism).

Abstract:
People make economic decisions every day, thus directing their own well-being. The aggregation of those choices consequently impacts the economy on a larger scale. Given the relevance of the decision-making at individual, micro and macroeconomic level, it is not surprising that huge research interest arose about defining decision-making processes, outcomes and errors. The goal of this research is to examine time and distance preferences in purchase situations where additional unit of time or distance saves respondent’s money. The previous researches investigate time and place distances as separate currents of theory, while the proposal of the interchangeability of distances as psychological constructs remains mostly theoretical. The aim of this research is to make another step in the direction of connecting those constructs and offer a research example. Given that intertemporal choice has stronger theoretical base, the respondents choices will be examined in relation to time preferences to determine a baseline for comparison. In order to enable comparison of place-distance to the intertemporal choice, the effort of crossing the distance to other location is expressed in time (15 minutes). In order to emphasis the time and distance effects, the discount amount is held fixed. Three frequently used commodities in different price ranges are picked for the choices in the questionnaire: T-shirt, TV and mobile phone. The data collected by questionnaire regards to 89 first-year students in Pula, Croatia. The first insight into data provides descriptive statistics, while the comparison of the choices proportion regarding time and distance will be tested in order to reveal similarities and differences. The responses follow similar pattern regarding the time and distance choices. The results show that there are statistical differences between T-shirt and TV purchase choice given the time, T-shirt time and T-shirt distance, and T-shirt and TV and mobile
phone distance. Among all of the determined statistical differences, the T-shirt choice reveals differences, both for time and distance options. This is confirmation of respondent’s perception of the discount in relation to original price, with an extension to time and distance effect. Overall choice proportion of discounted options is higher for the purchase at the 15-minute distant location (78.28%), than for the delayed purchase for a month (64.04%). In both cases, the purchase is delayed and carry additional cost. As the purchase at 15-minute distant location carries an intuition of time, it can be observed as an extension to the time preference and optimization. That can be further interpreted that smaller time delays support more rational choices.
PARALLEL SESSION 6 (WEDNESDAY 11:00)

Environment 4 (HOGAN 1)

“Warming to the idea: Results from a targeted randomised control trial to increase the uptake of heat-pumps in Ireland”

Wednesday 11:00 (HOGAN 1).

Karl Purcell (Sustainable Energy Authority of Ireland) with Mark Bohacek, Emer Burton, Andrew O’Callaghan.

Abstract:
Key to realising Ireland’s ambitious goals for carbon emissions reductions will be encouraging appropriately insulated households to install heat-pumps as their main source of space heating. To encourage well insulated households to install a heat-pump, the Irish exchequer, through the Sustainable Energy Authority of Ireland (SEAI) provides grant aid of up to €3,500 towards the cost of installation of a heat pump, in addition to a €200 grant support towards the cost of a technical assessment to ensure that the home is “heat-pump ready”. While the evidence as to whether grant funding alone, or indeed any single policy measure in isolation, increases the installation of energy efficiency measures is mixed (Olsthoorn et al, 2017; Mahaptra and Gustavsson, 2009), recent studies have suggested that multiple policy measures are required in tandem to increase installation rates (Fowlie, Greenstone, Wolfram, 2018). For example, financial supports may only spur additional installations if households are aware that they exist, accept that they are relevant and beneficial to them, and are supported throughout the installation process. The importance of communicating directly with potential beneficiaries (households) of Government funded financial supports is often overlooked by policymakers, who often assume that general mass media awareness campaigns may be sufficient to drive demand for such supports.

A recent field experiment by Czap et al. (2019) demonstrated that sending personalised letters to farmers to make them aware of the Conservation Stewardship Program doubled the uptake of the program while remaining highly cost effective. The authors also show that a behaviourally informed letter further increased response rates when it included a personalised hand-written message compared to an automated print message. This suggests that altering the content of personalised messages sent to potential beneficiaries of Government programs can further increase take-up.

Despite the potential in this area, social scientists have mostly focused on identifying methods to encourage curtailment behaviours rather than investment behaviours (Kastner and Stern, 2015). One notable exception to this trend is a field experiment conducted by Allcott and Greenstone (2017) which tested the impact of personalised behaviourally informed messaging to encourage the installation of energy efficiency measures in the United States. The authors experimentally assign over 100,000 households to various experimental groups testing whether information treatments, behaviourally informed treatments, or providing additional subsidies on the cost of a home energy audit encourage homeowners to install energy efficiency measures.

They find that simply receiving a letter compared to not receiving a letter only has a small effect on the likelihood that a household will conduct an energy efficiency audit and no statistically significant
effect on the likelihood that a household will actually install energy efficiency measures conditional on having an audit conducted. Furthermore, they find that none of the behavioural or informational treatments included in the letters increase uptake of energy audits or installation rates of energy efficiency measures relative to receiving a standard letter about the energy efficiency program. The only treatment that significantly effects take-up of audits is the inclusion of a subsidy which reduces the price of the audit. Taken together, these findings seem to suggest that there are other reasons why people do not invest in energy efficiency upgrades other than a lack of awareness of grant funded upgrade programs or a lack of information on aspects such as the benefits of these upgrades.

Using data from the Irish National Building Energy Rating Database, the current study investigates whether sending a targeted direct mailshot to households whose previous Building Energy Rating assessment indicates that their home is “heat-pump ready” increases interest in, and the installation of, heat pumps. While Allcott and Greenstone (2017) targeted their direct mail towards households whose characteristics broadly indicated that they may be eligible for energy efficiency upgrade, the dataset used in the current study allows for mailshots to be more accurately targeted to households who are likely eligible for grant funding to install a heat pump and who would benefit from installing one.

The data provided by each households Building Energy Rating also provide a rich set of control variables allowing the current study to examine the relationship between the details of the physical households’ construction, response rates, and installation rates. In addition, the current study also tests a number of behaviourally informed letters which communicate some of the non-energy co-benefits of installing a heat pump (e.g. improving air quality and reducing asthma in local areas). This is an important distinction because the use of solid fuels (coal, peat, and wood) and oil is substantially more common in Ireland, meaning the potential health benefits may be larger in an Irish context than in an American context.

Finally, the current study also reports the result of an A/B test conducted on a social media platform (Facebook) which took place at the same time as the targeted mailshot campaign. The A/B test compares the effectiveness of 5 different behaviourally informed advertisements to encourage users to click-through to the SEAI’s website to learn more about heat-pumps. These 5 behaviourally informed advertisements were designed to be as similar as possible as the messages used in the direct mailshot. While results between the two trials are not directly comparable, this allows for a policy-relevant comparison of the effectiveness of the two different “advertisement” approaches.

“Information, feedback, and policy complementarities: Evidence from a field experiment on energy conservation”

Wednesday 11:00 (HOGAN 1).

Ximeng Fang (University of Bonn) with Lorenz Goette, Verena Tiefenbeck, Bettina Rockenbach, Matthias Sutter, Samuel Schoeb, Thorsten Staake.

Abstract:
Imperfect information and inattention can drive a wedge between intentions and actions, e.g. with regard to energy conservation. Importantly, these barriers may reinforce each other and thus induce complementarities between targeted behavioural interventions. We run a three-month randomized
field experiment on energy use in the shower that combines real-time feedback and home energy reports, each targeting information and attention problems to different degrees. Home energy reports alone are ineffective, despite significant learning effects, whereas real-time feedback in isolation leads to 18% savings. Combining both interventions enhances this effect by 60%, suggesting that immediate feedback enabled knowledge gains to translate into conservation behaviour.

“Limited attention in the housing market: Evidence from energy efficiency ratings”

Wednesday 11:00 (HOGAN 1).

Rodolfo Sejas Portillo (University of Stirling) with David Comerford, Mirko Moro.

Abstract:
Introduction
We study limited attention and heuristic decision-making in the housing market. We analyse the effect that energy efficiency (EE) information has on the final sale price of a property and we show that the provision of simplified information in the form of EE rating-bands leads to price discontinuities at the rating-band thresholds.

Neo-classical economic models normally assume that agents, in order to make optimal decisions, process all of the information available to them within a utility maximising function. Yet, even when presented with all the relevant information, agents may not have the necessary skills, the cognitive ability, the incentives or the time to process or evaluate it as part of a complex utility maximisation calculation. Recent research suggests that individuals rely on heuristic principles that reduce complex information processing tasks to simpler judgemental operations, heuristics. While these heuristics may be useful given certain constraints, they can lead to sub-optimal systematic biases in market decisions e.g. by overreacting to simple but less accurate EE information. Although there is increasing evidence of these biases and the psychological mechanisms behind them from laboratory experiments, there is less research looking at how they manifest in real markets. This paper aims at contributing to the existing literature by providing evidence of the effects of limited attention and heuristic decision-making in high-value asset markets.

Method
Using a novel dataset, we analyse over 3 million residential property sales in the UK completed after the introduction of legislation making it mandatory for sellers to provide an energy performance certificate (EPC) to buyers. Each transaction in our dataset contains sale price, property characteristics, location and EPC at the date of sale. The EPC contains energy performance indicators including an energy cost rating (SAP rating) and an associated rating-band. The SAP rating represents the total energy cost requirements of the property, ranges from 1 to 100 (higher values represent more efficient properties) and allows for comparisons across different property types and sizes. SAP ratings are assigned to predefined fixed colour coded rating-bands (of around 12 units) from green A (most efficient) to red G (least efficient).

We apply a Regression Discontinuity Design (RDD) for the identification and estimation of discontinuities at each of the EE rating-band thresholds. We perform robustness checks including multiple parametric and non-parametric RDD methods, different sets of baseline covariates, density tests and discontinuity placebo tests.
Results
We find statistically significant discontinuities at the EE rating-band thresholds. As a result of the EE calculation process explained above, the sale price of a property increases smoothly as the SAP rating increases, however as the SAP rating crosses a rating-band threshold the price increases sharply higher (compared to counterfactual predicted prices of the SAP rating without the higher rating-band assigned). For example, rating-band E extends from SAP ratings 39 to 54, an increase from 52 to 53 or 53 to 54 results in smooth price increases, but from 54 to 55 (crossing to rating-band D) results in a much higher price increase (compared to counterfactual predicted prices).

We estimate that, all else equal, having a higher rating-band increases the price of a property between 0.5% and 4% depending on the threshold crossed. We also provide estimates of the inattention parameter.

Conclusion
Under the assumption of perfect rationality and full attention, since the rating-band classification does not provide additional information over the SAP rating, there should be no systematic price discontinuities at rating-band thresholds (a single point increase in SAP rating should cause a smooth price increase at all levels). The presence of price discontinuities suggests that individuals are more attentive to the less precise, more salient and simpler colour coded rating-band and partially inattentive to the more precise SAP rating.

We propose that while providing simplified information (e.g. colour coded rating-bands) may help individuals evaluate product features, in some settings it may lead to imperfect optimisation. We conclude with policy recommendations.

“Heterogeneity in preferences for renewable home heating systems in Ireland”
Wednesday 11:00 (HOGAN 1).

Tensay Meles (University College Dublin) with Sanghamitra Mukherjeea, Lisa Ryan.

Abstract:
Renewable sources of home heating, more specifically, heat pump systems are expected to play a vital role in the future energy portfolios as part of the solution to climate change mitigation. Compared to the conventional heating systems, heat pump systems are more energy efficient, have low maintenance and operational costs, and provide reliable and environmentally friendly home heating. However, the current levels of adoption among the Irish population are low and little is known about factors that affect consumers’ adoption of heat pumps. This paper uses a discrete choice experiment approach to investigate consumers’ preferences for heat pump technologies in a residential sector based on nationally representative respondents from Ireland. We employ mixed logit model to estimate consumers’ preferences and associated marginal willingness to pay (MWTP) for the attributes: total upfront cost, bill savings, environmental sustainability, installation hassle and increase in home comfort. We further analyse the choice experiment data using WTP in space and explore heterogeneity in preferences. Our findings show that upfront cost, bill savings, environmental sustainability and installation hassle significantly affect consumers’ preferences for heat pumps. The estimated results reveal the presence of heterogeneous preferences. The results also highlight that consumers are willing to pay for heat pumps; however, the values might not be
large enough to cover the high upfront cost, for example, of ground source heat pump. Overall, this study contributes to the literature in understanding the factors that hinder or facilitate consumers’ adoption of heat pump technologies and informs policy makers.
“Repaying debt and thinking about the future”
Wednesday 11:00 (HOGAN 2).

Aidan Feeney (Queen’s University Belfast) with Nicole Andelic.

Abstract:

Introduction: It is well-known that a tendency to focus on the present rather than the future is related to poor financial decision-making (Atlas et al., 2017; Meier & Sprenger, 2010), for example through temporal discounting – the tendency to value an immediate reward over a larger, future reward (Greenberg & Hershfield, 2019). Another reason for poor financial decision making may be differences in future self-continuity (FSC): people who feel less connected to their future selves may be less likely to make financial choices that benefit their future selves over their present selves (Ersner-Hershfield et al., 2009). Yet another possible influence on financial decision making may be the ability to engage in episodic future thinking (EFT). For example, Benoit et al. (2011) found that individuals who engage in more vivid future thinking are more likely to make choices that lead to long-term benefits.

The majority of the research on future thinking and financial decision-making to date has been on saving behaviour (see Ersner-Hershfield et al., 2009). However, problem debt is an increasingly important issue in the UK. Although many people are able to manage their debt repayments, personal insolvencies in England and Wales recently hit a seven year high (The Insolvency Service, 2019) and 50% of debt advice seekers do not adhere to the advice they are given (Money Advice Service, 2017).

The current study is carried out in collaboration with a company that provides Individual Voluntary Arrangements (IVAs). An IVA is a legal mechanism in the UK which allows people with substantial debt to negotiate a monthly repayment sum with their creditors over five years. If individuals repaying debt suffer from elevated levels of present-bias, this may act as an additional barrier towards making these payments. For example, if the primary source of motivation for completing an IVA is to become debt-free in the future, high levels of present-bias may counteract the positive effects of this motivation and lead to difficulties adhering to the IVA. Therefore, it is important to examine how individuals with problem debt think about the future.

Methods: The aim of the current study was to compare future thinking behaviours in individuals who are repaying debt in an IVA with an age-matched control group. We hypothesised that the IVA group would show higher levels of temporal discounting, lower levels of psychological connectedness to their future self and lower levels of episodic future thinking in comparison to the control group. The study employed existing measures of temporal discounting, EFT, FSC, temporal attention (Shipp et al., 2009) and temporal attitudes (Mello et al., 2016) in an online survey. Through our collaborator, a random selection of IVA clients was invited via email to take part in the study and an age-matched control group was recruited via an online recruitment platform, Prolific.

Results: A logistic regression on 238 participants, with all predictors (excluding EFT) showed that lower FSC ($\beta = -0.45$, $p = 0.008$), higher temporal discounting ($\beta = -0.33$, $p = 0.044$) and higher perceived financial stress ($\beta = 0.93$, $p < 0.001$) were significant predictors of being a debtor. A
separate regression on the subset of the sample with EFT data (164 participants) showed that lower EFT was also a significant predictor of being a debtor (β = -0.60, OR = 0.55, p = 0.006). Temporal discounting was associated with FSC (r(236) = 0.24, p < 0.001), but not with EFT (r(162) = 0.03, p = 0.719). Finally, there was a significant association between temporal discounting and progression through the IVA (r(129) = -0.22, p < 0.012), such that people fend closer to their future self as they approached the end of their repayment term.

Discussion: As hypothesised, people in an IVA were significantly more present-biased, showing higher rates of temporal discounting, lower FSC and lower EFT than a control sample. It is difficult to draw conclusions about direction of causality from these results. One possibility is that individuals who are more present-biased are also more likely to get into debt. Another is that being in a debt repayment arrangement may lead to present-bias as a consequence of the restrictive nature of the arrangement. That is, choosing an immediate reward over a delayed reward may be more tempting if one’s current financial situation is highly constrained. Regardless of the causal direction, present-bias in an IVA may lead to difficulties adhering to the IVA if debtors choose short-term rewards over long-term benefits.

“Predicting advice adherence from debt advice appointments”
Wednesday 11:00 (HOGAN 2).

Nicole Andelic (Queen’s University Belfast) with Aidan Feeney.

Abstract:
Introduction: Debt advice is sought by only a minority of those who need it in the UK (Department for Business, Innovation & Skills, 2011; Money Advice Service, 2016), and debt advice conversations can be difficult due to the negative connotations of being in debt (Andelic, Stevenson, & Feeney, in press). Moreover, there is evidence that just over half of advisees adhere completely to the advice they receive (Money Advice Service, 2017). In this prospective study we examined the characteristics of the advisee-advisor relationship and the features of the advisee which predicted advisee adherence to debt advice. In particular, we were interested in whether the advisee’s trust in and disclosure to the advisor, their feelings of accountability towards the advisor, their feelings of personal responsibility to resolve their debt, and their mental health predicted advice adherence.

This study was carried out in collaboration with a private company in the UK specializing in Individual Voluntary Arrangements (IVAs), which are five-year legal debt repayment plans often involving substantial discount to the original debt. By administering surveys to participants after their advice appointment, we were able to prospectively predict debt advice adherence. This method circumvents problems of sample attrition, and definitional issues around problem debt which have made the results of previous studies difficult to interpret.

Methods: The aim of this study was to find out which variables affected the likelihood of debtors adhering to debt advice. The dependent variable was Advice Adherence, operationalized as whether the client had completed an IVA application ten weeks after participating in the survey. Our primary predictors were Trust in the advisor (using an adapted version of the Mayer & Davis, 1999, Trust scale), Accountability towards the advisor, personal and financial Disclosure, feelings of Responsibility for resolving the debt, and advisee Mental Health (using the MHI-5, Ware &
Sherbourne, 1992). We also controlled for attitudes towards an IVA, recall of factual details covered during the appointment, advice mode, survey mode, days between initial advice appointment and survey completion, and the advisor spoken to. Eighty-six debtors who indicated at the end of their initial interview that they intended to apply for an IVA completed the survey via telephone or online.

Results: A logistic regression showed that Accountability towards the advisor (β = 1.21, OR = 3.35, p = 0.028) and advisee Mental Health (β = 0.78, OR = 2.18, p = 0.036) were positive predictors of Adherence, whereas Responsibility (β = -1.18, OR = 0.31, p = 0.048) was a negative predictor. Attitudes towards an IVA (β = 0.81, OR = 2.25, p = 0.044) and Recall of appointment details (β = 0.81, OR = 2.25, p = 0.046) also predicted Adherence.

Discussion: For the first time, we have shown that feelings of accountability towards the debt advisor predict debt advice adherence. One possibility is that accountability predicts adherence due to the advisee’s need to be viewed favourably by the debt advisor (Lerner & Tetlock, 1999). This finding suggests the possibility of interventions to promote advice adherence whilst, at the same time, suggesting a need for careful consideration of how advisee–advisor relationships are managed. It is striking that feelings of responsibility for resolving one’s debt were a negative predictor of advice adherence. Andelic et al (in press), found that opting for a debt repayment arrangement that writes off debt may be perceived as problematic by some debtors. Thus, feeling personally responsible may have led some advisees to disregard a solution that involved discount on their debt.

Consistent with previous research on debt and mental health (e.g. Richardson et al., 2013), our study found that the average levels of mental health were much lower in our sample than in the general population and, for the first time, we have shown that higher mental health scores predict debt advice adherence. Thus, psychological interventions targeted at improving mental health may greatly improve the likelihood that a legal mechanism, such as an IVA, will help consumers to resolve their problem debts.

“Don’t expect too much: The effect of biased expectations on (over)-indebtedness”
Wednesday 11:00 (HOGAN 2).

Wiebke Stein (Leibniz University of Hannover) with Theres Kluehs, Melanie Koch.

Abstract:
Household indebtedness is increasing worldwide. This study investigates one possible driver of this increase: biased income expectations. Thereby, we refer to the “permanent income hypothesis,” which predicts that individuals borrow more to-day if they expect a higher income in the future. We collect data from an emerging country as (over-)indebtedness in markets with incomplete financial infrastructure and social security can be devastating. Furthermore, our sample of poor, rural households in Thailand is exposed to a high degree of uncertainty, which makes expectation formation prone to behavioural biases. Controlling for various household characteristics, while also employing several distinct measures for biased expectations and over-indebtedness, we find a strong and robust relationship between the two. In an additional lab-in-the-field experiment, we explicitly find that overconfidence is related to overborrowing.
Abstract:
The aim of this study was to examine which economic and non-economic variables are significant predictors of the propensity to take loans for different purposes. We have distinguished: (A) loans for necessities, (B) for hedonistic purposes, (C) for long term investment and (D) to help relatives.

Four different kinds of predictors were taken into consideration: (1) economic and demographic variables (income, total debt, debt burden and age); (2) subjective assessment of one’s own life (life satisfaction and subjective assessment of financial situation); (3) psychological variables (locus of control, aversion to planning, readiness to spend money on others and readiness to take out loans) and (4) previous experience with loans incurred for four different purposes (the same purposes as in case of dependent variable).

A nationwide representative survey of Poles (N=604) who have contacted debt collection department or company at least once in 5 years was conducted. In order to examine which economic and non-economic variables are significant predictors of the propensity to take loans for different purposes hierarchical linear regressions have been conducted (see Table 1).

In Step 1, the propensity to take loans for different purposes were regressed on economic variables and age. Age occurred to be irrelevant for the propensity to take loans for any of the purposes. Income was significant only in case of the propensity to take loans for necessities and for long term investment. Total debt was significant only for the propensity to take loans for the long investment, and debt burden was significant for the propensity to take loans for the necessities.

In Step 2, variables related to subjective assessment of one’s own life were added to the equations. It has increased significantly the explained variance in case of the propensity to take loans for long term investment and for necessities. Income and debt burden have ceased to be significant predictors for the propensity to take loans for any of examined purposes. Life satisfaction occurred to be significant predictor for the propensity to take loans for long term investment and subjective assessment of one’s own financial situation for the propensity to take loans for necessities.

In Step 3, psychological variables were included. It has increased significantly the explained variance in case of the propensity to take loans for all analyzed purposes. Readiness to take out loans was significant predictor for the propensity to take loans for all analyzed purposes. Readiness to spend money on others and locus of control were significant predictors for the propensity to take loans to help relatives, while aversion to planning predicted the propensity to take loans for long term investments. Interestingly, after taking psychological variables into account income turned out to be important again in case of the propensity to take loans for necessities.

Finally in Step 4, previous experience with loans incurred for four different purposes were added, which caused the greatest change in the explained variance in case of the propensity to take loans for all purposes. As expected, people who had previously taken loans for a specific purpose were more likely to get loans for a given purpose in the future. Moreover, previously taken loans for long term

Anna Hełka (University of Warsaw (Faculty of Psychology)) with Dominika Maison.
investments were significant predictor for the propensity to take loans for hedonistic purposes, while previously taken loans for necessities were predictor for the propensity to take loans to help relatives. The fact that earlier experiences with loans were taken into account decreased the importance of the readiness to take out loans, which remained significant predictor only for the propensity to take loans for hedonistic purposes and for necessities. After adding previous experience to the analysis, economic variables were no longer significant predictors for the propensity to take loans for any purposes.

In conclusion, loans for various purposes have different predictors, which, unlike what previous research has shown, are mainly non-economical!
Well-being 2 (NALLY)

“Time use, unemployment, and well-being: An empirical analysis using British time-use data”
Wednesday 11:00 (NALLY).

Andreas Knabe (Otto von Guericke University Magdeburg) with Thi Truong An Hoang.

Abstract:
We use nationally representative data from the UK Time-Use Survey 2014/2015 to investigate how a person’s employment status is related to time use and cognitive and affective dimensions of subjective well-being. We find that unemployed persons report substantially lower levels of life satisfaction than employed persons. When looking at specific types of activities, the unemployed enjoy most of the activities they engage in less than the employed. However, the employed consider working to be one of the least enjoyable activities. They also spend a large share of their time at work and with work-related activities, while the unemployed spend more time on leisure and more enjoyable activities instead. When looking at duration-weighted average affective well-being over the entire waking time of the day, our results suggest that the benefit of having to spend less time at work outweighs the negative emotional effect of unemployment during leisure episodes, such that the unemployed experience, on average, more enjoyment during the day than the employed.

“Employee voice and well-being: The moderating role of national culture”
Wednesday 11:00 (NALLY).

Maria Pereira (University of Coimbra-Faculty of Economics) with Filipe Coelho.

Abstract:
This study examines the moderating effect of cultural norms on the relationship between employee voice and employee well-being. Employee well-being has been extensively studied, as a means to promote employee performance and, therefore, organizational competitiveness (Holland et al., 2011). In this endeavour, employee voice, which involves expressing grievances with the hope that management will change the work environment (Wood, 2008), emerged as a significant predictor of employee well-being. Past research on the antecedents of employee well-being, however, has observed that the effect of job characteristics on job satisfaction are moderated by cultural norms (e.g., Huang & Van de Vliert, 2003). Specifically, work environments are crafted within nations (Erez, 2010) and, through the process of socialization, individuals’ come to appreciate work context factors that mirror traits that are culturally inherited (Huang & Van de Vliert, 2003). Following this research vein, our study innovates by investigating how cultural norms affect the relationship between two forms of employee voice arrangements, namely direct and union-voice (cf. Holland et al., 2011) and employee well-being. Given the multidimensional level of employee wellbeing (Wood, 2008), this study considers three outcome measures, namely work-life balance, satisfaction with pay, and overall job satisfaction.

We approach the issue of cultural norms by relying on the influential work of Hofstede (1980, 1991, 2001, 2010). Hofstede (1980: 21) defines national culture as “the collective programming of the mind, which distinguishes the members of one human group from another.” Culture entails a body of symbols, rituals, and values that are shared with others and that are acquired through a learning
process embedded in a specific social environment (Hofstede, 1991). Such shared systems have been related to differences in attitudinal and behavioural responses, such as in terms of employees’ loyalty towards their employer (e.g., Triandis, 2004). Hofstede (1991) conceived culture as a multidimensional construct, distinguishing six different dimensions, which are subsequently discussed. Power distance is “the extent to which the less powerful members of organizations and institutions accept and expect that power is distributed unequally” (Hofstede, 1991: 28). In countries with lower power distance people develop more informal relations and do not see hierarchical positions as deterrents from social interaction. Uncertainty avoidance is defined as the level of tolerance for uncertainty, indicating how much people act to avoid uncertain or unknown situations (Hofstede, 1980, 1991). In countries with a strong uncertainty avoidance orientation, people do not adjust easily to novelty, and prefer structured relationships (Triandis, 1995). Individualism “pertains to societies in which the ties between individuals are loose: everyone is expected to look after himself or herself and his or her immediate family.” (Hofstede, 1991: 51). Individualist societies are prolific in independent and egocentric individuals (Triandis & Suh, 2002). Masculinity-femininity concerns the extent to which a society has distinct gender roles. Feminine societies appreciate gender equality, with both men and women expected to be modest, and caring (Hofstede, 1991). Long term orientation “stands for the fostering of virtues oriented towards future rewards, in particular perseverance and thrift” (Hofstede, 2001: 359). In long term oriented societies people attend to long term values, such as adjustment capacity, persistence and parsimony, looking for future rewards. Indulgence describes a societies’ tendency to search for happiness through a hedonistic behaviour and a firm belief on personal life control and on freedom of expression.

Data on individual characteristics is drawn from the fifth round of the European Social Survey fielded in 2010. Data on the six national culture dimensions was obtained from Hofstede’s website (https://www.hofstede-insights.com). Our dataset covers the 24 countries for which there are data in both databases. The dependent variables in this study are based on the following ESS questions: “How satisfied are you in your main job” (job satisfaction), “How satisfied are you with the balance between the time you spend on your paid work and the time you spend on other aspects of your life?” (work-life balance); “To what extent do you agree or disagree with the following statement: ‘considering all my efforts and achievements in my job, I feel I get paid appropriately’?” (satisfaction with pay).

The main independent variables are retrieved from the following questions: (1) “How much influence would you say these discussions [between representatives of the employer and employees] generally have on decisions that affect your working conditions and practices?” for measuring direct voice; “How much influence would you say that trade unions at your work place generally have over decisions that affect your working conditions and practices?” for measuring union-voice. We control for socio-demographic variables (age, gender, marital status, and education level), and for work related factors (trade union membership, duration of work contract, establishment size, supervising responsibility, total hours normally worked, task most time spent on, type of work, type of organization, autonomy and other job characteristics, namely work variety, continuous learning required, wage dependent on effort, help from co-workers, puts health at risk, daily work schedule flexibility, and job security).

We used the ordered probit estimation method as the dependent variable is a discrete five- or ten-outcome ordered variable. The estimations comprise control variables, all six cultural dimensions
(zero, if index \( \leq 50; \) one, if index \( > 50)\), the variables representing direct and union voice and multiplicative interaction terms, which are formed by multiplying each cultural dimension by each of the two types of voice.

Overall, the results indicate that direct voice has a positive main effect on the different dimensions of employee well-being, unlike union voice, which seldom has a significant main effect. Moreover, the effects of direct voice on employee well-being are generally independent of culture. However, union voice frequently has a significant effect on the different dimensions of employee well-being when we introduce the moderating effect of each of the cultural dimensions. Hence, the effects of union voice tend to be totally moderated by the dimensions of national culture. These results add important insights into existing knowledge on the relationship between employee voice and employee well-being.

“The happiness effect of reforming a public employment agency”
Wednesday 11:00 (NALLY).

Max Deter (Bergische Universität Wuppertal).

Abstract:
Following a decade of rising unemployment rates after reunification, Germany was pressured to bring unemployment down. Between January 2003 and January 2005, the government under Gerhard Schroder, a coalition of Social Democrats and the Green Party, introduced a series of labor market reforms, known collectively as the Hartz reforms. The main focus of the reforms was the supply side of labour, increasing labour market flexibility (Hartz I-III) and reducing level and duration of unemployment entitlements (Hartz IV). Additionally, long-term unemployment income was made conditional on job search behaviour and can be sanctioned by job centres.

Germany experienced in the following years a steadily declining unemployment rate, a development that was likely favoured by the Hartz IV law (as well the Hartz reforms in general) through stronger job search and concessions of unemployment workers regarding employment and wages (Hochmuth et al., 2019). Nevertheless, Hartz IV remains one of the most controversial topics in the national debate and is discussed also internationally, where it is often seen as a role model for labour market reforms (see, for example Laskus et al., 2018; The Economist, 2018). In Germany, the Hartz reforms have been criticized mainly for the possibility of total income sanctions and the equal treatment of long-term unemployed workers with a large employment history and those that never worked (Wirtschaftsdienst, 2019). Reform proposals regarding Hartz IV exist from almost all political parties (see, for example Roßbach, 2019), among those that introduced the law.

Despite the scope of the reforms and their relative importance in the scientific world (see, for example Krause and Uhlig, 2012; Hertweck and Sigrist, 2013; Woodcock, 2018) relatively little is known about the reforms’ effect on life satisfaction of unemployed workers. This is surprising because life satisfaction influences individual actions substantially and has been broadly analyzed in economic (Frey and Stutzer, 2002; Alesina et al., 2004), psychological and sociological (Dolan et al., 2008; Diener et al., 2006) research and is highly correlated with better health (Headey et al., 1993). Therefore, it is necessary to learn more about the relationship between the Hartz reforms and life satisfaction.
In the analysis, I use unbalanced data from the German Socio-Economic Panel (GSOEP) for the period of 1999-2009 and apply a Difference-in-differences (DD) estimation with full-time employees without unemployment experience as the control group. Results show that the reforms had a significant negative effect on life satisfaction of unemployed workers compared to the control group. The findings are partly driven by changes in unemployment duration, income and job search behaviour. However, the effects are very heterogeneous. Life satisfaction of older workers with a rich employment history, wealthier as well as unemployed individuals with a working partner and no children are rather negatively impacted. On the other hand, no effects can be observed for younger, female and short-time unemployed workers. This is in line with the specific structure of the Hartz reforms that restructured long-term unemployment entitlements for older and work experienced individuals, took financial assets stronger into account and changed the income needs calculation to the household level. Robustness tests with personal fixed effects that exclude the control group indicate similar results.

The current paper adds to the literature on the Hartz reforms the component of happiness. This is important because a drop-in happiness leads stronger job search, but is not associated with better job opportunities (Gielen and van Ours, 2012). While many individuals gained from the Hartz reforms through better employment opportunities, others have lost from it and might be at risk at fully withdrawing from the labour market. This empirical paper shows that individuals are affected very differently from reforming the employment agency. This should be taken into account in reform proposals regarding Hartz IV.

“Television and family stereotypes: Evidence from East-Germany”

Wednesday 11:00 (NALLY).

Sven Hartmann (IAAEU - Trier University).

Abstract:
In almost all OECD countries, divorce rates have been increasing over the last decades, with countries like Belgium, Greece, Israel, Luxembourg, Korea, Norway, Portugal, and the Slovak Republic having seen an increase of their crude divorce rates to more than double the former rates. During the same period, marriage rates have declined overall. While in 1970, the number of marriages per 1000 inhabitants ranged from around 7 to 10, the numbers decreased to around 5 to 7 in 2016 (OECD, 2018b). A similar pattern exists for fertility rates, which also dropped during the last few decades (OECD, 2018a). Similar to most OECD countries, Germany exhibits falling marriage rates, from 7.4 in 1970 to 4.9 in 2017, while divorce rates have increased from 0.98 to 1.85 (Destatis, 2019a). Further- more, fertility rates decreased in the same period. Unlike many other OECD countries, Germany shows increasing fertility rates since the mid-nineties (Destatis, 2019b).

In last decade, several studies have looked at how repeated media exposure affects families. Chong and Ferrara (2009) analyze the link between geographical television expansion and divorce rates in Brazil. By doing so, they show that the share of women who are separated or divorced increased significantly after the RedeGlobo signal (a Brazilian television network) became available. RedeGlobo had a virtual monopoly on soap-operas with one characteristic of these broadcasts being the portrayal of families as small families. In this regard, La Ferrara et al. (2012) utilize the same natural experiment and show that women living in areas with RedeGlobo coverage exhibit lower fertility. By
exploiting the variation in the introduction of cable television in India, Jensen and Oster (2009) find that the introduction is associated with decreased preferences for sons and domestic violence against women. Similar to La Ferrara et al. (2012), they also find decreasing fertility rates.

In this paper, we are interested in the long-term causal effect of West German television (WGTV) exposure on family role models in East Germany. In particular, we analyze the impact of television reception on marriage, divorce, and fertility rates. We exploit the fact that individuals in some areas of East Germany – due to their geographic location – could not receive West German television prior to the reunification in 1989.

The difference between West and East German television was not only restricted to politics and ideology. Both programs contained completely different gender and family stereotypes (Do¨lling, 1993). Not only did WGTV present wealth and the aesthetically pleasing sides of the world more frequently, it also featured fewer children. Furthermore, as several studies have pointed out, the portrayal of women in WGTV was characterized by the depiction of (rather) independent females who were unmarried, young and appealing to the viewer (Weiderer and Faltenbacher, 1994). On the contrary, qualities such as maternalistic attitudes and a lack of sex appeal were attributed to married women. Generally, no more than 50 % of the females depicted were employed, while married female characters had an employment rate of less than 20 %. Contrary to the expectation that these women

For an excellent literature review, see Price and Dahl (2012). In addition, DellaVigna and Ferrara (2015) provide a lengthy literature review, in which they summarize studies analyzing the impact of media on further outcomes (e.g. education, labor, health, crime etc.).

Over the last decade, economists and political scientists have used the historical division of East and West Germany as a natural experiment to explain, for example, policy preferences for state intervention and redistribution (Alesina and Fuchs-Schündeln, 2007), and individuals’ attitudes towards social trust, risk, perceived fairness and cooperativeness (Heineck and Suessmuth, 2013). More recently, scholars have also exploited the variation in the availability of WGTV within the former German Democratic Republic (e.g. Hornuf et al., 2018, Bursztyn and Cantoni, 2016, Hennighausen, 2015).

Figure 1 shows a map of the reception area of West German television in East Germany. In addition, Figure 2 illustrates the reception area based on county borders were portrayed as stereotypical housewives, only a small minority engaged in household activities on screen (Bo¨nisch and Hyll, 2015).

In this regard, social learning theory predicts that people’s behaviour is learned by observing the behaviour of others and then by imitating them. West German television constantly exposed its audience to women, who are single and unmarried. This might have created preferences for living alone instead of being in a partnership or in a marriage. The same applies for the minor role of families with children in West German television programs, which might have led to lower fertility rates.

To analyse these presumptions, we use three different data sources. Firstly, we use four surveys that were conducted by the Central Institute for Youth Research (Zentralinstitut fur Jugendforschung) prior to the reunification in East Germany. After focusing on the impact of West German television
on people’s attitudes and preferences in the late-eighties, we use the German Socio-Economic Panel (GSOEP) to investigate whether these preferences persist after the reunification. Thirdly, we use administrative data for the time period from 1995 to 2015 provided by BBSR Bonn (2018).

Our empirical results show that for women living in areas with former WGTV reception, being married or being a mother is significantly less relevant for happiness. In contrast, they exhibit a higher importance for self-fulfilment. Furthermore, the probability of these women to be married or having children was significantly lower compared to women living in the control area. In line with our hypotheses, the probability of being divorced is higher in the treatment area. By analysing the administrative data, our results show that WGTV has a significant and negative impact on marriage rates and positive impact on divorce rates, even 25 years after the reunification. Differences between areas with and without Western television cannot be explained by the economic situation, differences between city and countryside or by regional differences in terms of education, as we have demonstrated by using various control variables.
Preferences 3 (DAVIN)

“Age brings patience to the rich but impatience to the poor”
Wednesday 11:00 (DAVIN).

Giovanni Burro (University of Warwick) with Rebecca McDonald, Daniel Read.

Abstract:
A familiar critique of JDM research (and psychology in general) is that it focuses on that relatively small part of the human universe called WEIRD (Western Educated Industrialized Rich and Democratic) by Heinrich et al. (2010). Researchers have responded to this critique by expanding their focus to a wider range of countries and populations. We add to this by studying an international sample comprising 64 countries and over 45,000 participants, and analyse time preference relates to income, age, religious beliefs, and level of education. We will focus on results pertaining to age and income, and suggest there is an intertemporal equivalent of the “Easterlin Paradox” in which relative but not absolute income predicts changes in patience as people age.

Both theory and data suggest a relationship between income and patience. In general, for given outcomes, wealthier people are expected to be more patient than less wealthy ones. Experimental studies, however, are at risk of confounding wealth with outcome magnitude, since a fixed reward may be more significant to a poor person than to a rich one. One unique aspect of our study is the use of a novel measure that automatically “corrects for” income differences among respondents. Instead of asking people to make choices between a fixed smaller sooner and larger later option, we obtained choices between an extra payment “... equal to that of your normal monthly income” and one “… equal to twice that of your normal monthly income.”

With respect to age, theory and data are much more equivocal concerning how age will relate to discounting. Different theories predict different patterns, and all these patterns have been observed in at least some studies. In a recent international study, Falk et al. (2018) observe a U shape, with greater discounting amongst the young and old, and less discounting amongst the middle-aged. Other researchers have found that decreasing discounting with age, or increasing income with age. Each study has its own methods and population, so it is difficult to draw general inferences from this diversity. It is noteworthy, however, that while the wealth effect holds under virtually all experimental tests, the age effect does not.

We found an effect that has not before been observed, or even predicted. Young people discount the future at approximately the same level regardless of income. Older people, on the other hand, discount more when they are less well off, and discount less when they are more well off. This produces a fanning out effect, with the older poor becoming much more impatient than the older rich. Although no one has predicted such a result, it does fit with a number of previous theoretical accounts. One account, which remarkably can be derived from Ramsey (1928), is the notion that if discount rates differ among people, we will find that over the lifespan those who are more patient will become better off, while those who are less patient will become worse off. If people started off with wealth “randomly distributed” over patience levels, we would expect that those with lower discount rates end life richer than those with higher rates. With age (measured cross-sectionally) those with the highest income when older would have lower discount rates than those with the lowest income, while in their early years those with higher and lower income would not differ.
appreciably. Becker and Mulligan’s (1998) theory is also consistent with our results: While people may not be born with different discount rates, those who are well off will find it worthwhile to invest more in thinking about the future, and so will, therefore, become more patient over time because of this investment. The very poor, on the other hand, will find no reason to make this investment.

If we consider data at the country level so that we look at the wealthiest countries (as defined by GDP) and the least wealthy, we do not find this effect. Indeed, for all GDP quintiles people become less patient with age (although the evidence is strongest for the wealthiest countries). Therefore, it appears the age/income interaction concerns only relative and not absolute deprivation.

In addition to the age/income interaction we will describe a number of important results from our data relating to differences between country, the effect of language on discounting, on whether the future orientation index (Preis et al., 2012) predicts discounting, and the effects of religion.

“Choice inertia with limited comparability”

Wednesday 11:00 (DAVIN).

Bartłomiej Wiśnicki (Warsaw School of Economics).

Abstract:
The neoclassical economics, among others, significantly relies on the principle of complete information and perfect rationality of consumers. In particular, the agents are able to fully identify and assign quality to the offered product, which may involve sophisticated knowledge of its specification or they can draw conclusions that may involve the usage of advanced analytical tools. The empirical evidence however indicates that consumers make their purchasing decisions based on partial, anecdotal information that is often obtained from their own experience or heard from other parties. This quality accessing rule may be biased due to depending only on a sample of information instead of a whole market situation which can generate an advantage for profit-maximizing firms. Moreover, the consumers tend to overvalue their previous choice thus displaying bias in the product evaluation.

The research takes a game theoretic approach to model the situation of an industry in which consumers display choice inertia while having limited information about the product. We assume that consumers rely on anecdotal information during product assessment. In addition, they tend to overvalue and stick to their previous choice as long as it is satisfactory for them. For a framework has been chosen a repeated Bertrand duopoly with heterogeneous consumers in terms of reservation prices. The consumers’ behaviour is modelled by the Markov process of choosing a company which is approximated using differential equations.

We find that high choice inertia can significantly alter the comparative statics of the reputation increase of firms. The key finding of the paper is that the choice inertia, while intuitively increases prices and harms consumers, may serve as a quality increasing impulse for firms that benefits both consumer surplus as well as industry profits.
“Type stability and response times: Evidence from a public goods game”
Wednesday 11:00 (DAVIN).

Matteo Migheli (Università degli Studi di Torino) with Gianna Lotito, Jakub Šindelář.

Abstract:
Experimental economics uses response times as a tool to evaluate the instinctiveness of choices and behaviours. They have been used to define types of subjects, but never to evaluate the stability of such types. This paper defines stability of types in terms of the variability exhibited by the choices made by an individual in a repeated experiment. The analysis of response times and type stability shows that stability is more instinctive than instability, supporting the idea that types exist and that deviations require cognitive effort.
Biases & decisions 6* (SUITE 679)

* Submitted session.

“Preference reversals: An eye-tracking study”

Wednesday 11:00 (SUITE 679).

Alexander Ritschel (University of Zurich) with Carlos Alos-Ferrer, Alexander Jaudas.

Abstract:
A classical explanation for the preference reversal phenomenon, where decision makers’ choices contradict their own elicited willingness to pay, is the Compatibility Hypothesis. It argues that the elicitation method creates a disproportional weighting of attributes of the gambles that are closest to the attribute focused on in the elicitation method. We investigated this hypothesis in an eye-tracking experiment analysing visual fixations while varying the elicitation method (cardinal pricing and ordinal ranking). We examine how the different elicitation methods result in different attentional shifts and how those influence preference reversals, thereby clarifying the attentional determinants of reversals between economic evaluations and preferences revealed by direct choices.

“The determinants of preference reversals in lottery choice”

Wednesday 11:00 (SUITE 679).

Carlos Alós-Ferrer (University of Zurich) with Johannes Buckenmaier, Michele Garagnani.

Abstract:
This paper sheds new light on the preference reversal phenomenon where decision makers reveal an inconsistency between valuations and choices. We conduct a lottery choice experiment and estimate individual utility functions out-of-sample. This allows us to identify correct responses and errors for both valuations and choices. We find that errors in the pricing phase are the primary source of preference reversals, which is in line with the overpricing phenomenon associated with the compatibility hypothesis. Using a ranking-based, ordinally-framed evaluation task reduces valuation errors and predicted reversals. Moreover, we find a clear link between preference reversals and psychometric effects (“strength-of-preference”), which provides an explanation of the mechanism underlying the overpricing phenomenon.

“Imperfect bayesians”

Wednesday 11:00 (SUITE 679).

Federica Farolfi (University of Zurich) with Carlos Alós-Ferrer.

Abstract:
Human beings are imperfect Bayesians. We conducted a belief-updating experiment showing that errors in probability updating are of two different kinds. On the one hand, errors are more frequent when the consequences are less severe, in line with psychometric effects from psychology and neuroscience, and analogously to strength-of-preference regularities in stochastic choice. On the
other hand, heuristic processes with different degrees of automaticity (e.g., conservatism or the representativeness heuristic) sometimes conflict with Bayesian updating, creating additional and systematic errors which can still be observed when controlling for strength of preference. We rely on both conditional error rates and process evidence (response times) following the Dual-Process Diffusion Model (Alos-Ferrer, 2018) to disentangle both types of errors.

“A tale of two mechanisms: The determinants of errors in decisions under risk”

Wednesday 11:00 (SUITE 679).

Johannes Buckenmaier (University of Zurich) with Carlos Alós-Ferrer, Michele Garagnani.

Abstract:
Decision making under risk often exhibits patterns which are systematic, but inconsistent with standard economic preferences (e.g. based on expected utility). There are (at least) two fundamental mechanisms that might explain these apparent inconsistencies: First, choice is stochastic with choice frequencies being determined by cardinal differences in independently-estimated utility (“strength of preference”). Second, choices often result from the interaction and even conflict between different decision rules, for example, sometimes certain elements trigger heuristic behaviour that is at odds with more normative modes of behaviour (e.g. utility maximization). We conduct a lottery choice experiment designed to trigger well-known violations of expected utility theory such as the certainty effect (Kahneman and Tversky, 1979). To avoid reverse inference, we estimate individual utility functions out-of-sample, carefully chosen as not to be affected by known biases. We identify two sources of errors: On the one hand, a gradual strength-of-preference effect leads to more errors for more difficult decisions. On the other hand, there is clear evidence for a conflict of decision rules. Our data shows that even in the absence of a heuristic inconsistencies resulting from strength of preference may arise. Further, even after controlling for strength of preference, we find clear evidence for a conflict of decision rules.

“Strength of preference and decision making under risk”

Wednesday 11:00 (SUITE 679).

Michele Garagnani (University of Zurich) with Carlos Alos-Ferrer.

Abstract:
Overwhelming evidence from the cognitive sciences shows that, in simple discrimination tasks, humans make more mistakes and decide more slowly when the stimuli are closer along the relevant scale. We investigate to what extent these effects are relevant for economic decisions. Strikingly, we find that even when there is an objectively correct answer independently of attitudes toward risk, the same effects (for error rates and response times) obtain as expected values become closer. When correct answers depend on subjective attitudes toward risk, the effects on error rates and response times subsist but are instead explained by cardinal differences in independently-estimated, subjective utilities. This is in agreement with assumptions typically made (but seldom validated) in random utility models.
“What factors inform public assessments of social policy interventions (e.g. nudges)?”
Wednesday 11:00 (SUITE 686).

Magda Osman (Queen Mary University of London) with Natalie Gold, Yiling Lin.

Abstract:
Social policy interventions are methods that are used to help direct a positive change in behaviour without fundamentally changing the incentive structure of the decision context (see Osman et al, in press). The application of insights from the behavioural sciences to help develop behavioural interventions targeting public policy issues is a global trend. They are popular and ubiquitous, take for example the OECD (2017) and the European Commission (2016) published a catalogue of behavioural interventions targeting a host of public policy issues. In these, and a report published by the World bank (2015), the identified policy domains in which behavioural interventions could/or have been applied span consumer protection, education, energy, the environment, financial products, health and safety, transport, taxation, telecommunications, public service delivery, labour market.

What the present study asks is how are behavioural interventions (BIs) proposed by different agents perceived by the public, particularly the types of arguments that are presented around BIs and their effectiveness. To examine this, our study included several manipulations. In summary, previous survey studies on public attitudes towards BIs suggest that judgments are more favourable when the BIs are transparent rather than opaque. There is also some work to suggest that the type of expert designing the BIs influences attributions of trustworthiness, and that arguments regarding the efficacy of BIs influence preference judgments. What isn’t clear is how these different sources of information—regarding type of intervention, type of expert, and type of argument used to propose the intervention—are prioritised when making assessments of BIs. Therefore, in the present study we compare the impact on assessments of BIs when the public is presented with one of three types of arguments regarding the efficacy of BIs (Positive, Positive + Negative, Negative), when BIs are either Transparent or Opaque, and when the experts proposing the BIs are either Scientists, Government Policy Makers, or Advertisers. To extend previous findings in the area of public assessments of BIs, we test the following predictions:

Prediction 1: Transparent (Transparent > Opaque) BIs should consistently lead to more favourable assessments (transparency, effectiveness, acceptability) in a range of policy domains (Diet, Smoking cessation, Exercise, Alcohol consumption, Personal finance).

Prediction 2: Positive arguments (Positive > Positive + Negative > Negative) regarding the efficacy of BIs will lead to more favourable assessment of BIs.

To investigate the various factors of interest we introduced the following between-subject manipulations: 3 types of argument (Positive [Experiment 1a], Positive + Negative [Experiment 1b], Negative [Experiment 1c]) description of likelihood of generating predictable behavioural change) x 2 transparency of the intervention (Transparent, Opaque) x 3 agent proposing the social policy intervention (Researcher, Government, Advertiser).
In each experiment (Experiment 1a, 1b, 1c) participants were randomly allocated to one of the 6 between-subject conditions. For each experiment (Experiment 1a, 1b, 1c) there was one within-subject manipulation: 5 different contexts in which a BI was implemented, each of which was based on a genuine intervention. The experiments included US (Total N = 872) and UK samples (Total N = 843). All experiments were presented via Qualtrics which is an online platform for running experiments, and launched via Prolific Academic - a crowd sourcing system for participant recruitment worldwide.

After they were presented with 5 demographic questions (age, gender, education, political affiliation, and, religion), participants were then given descriptions of 5 BIs, the presentation of which was randomized for each participant. For the 5 BIs all participants were required to respond to 4 questions concerning: 1) Transparency of the BI [To what extent is it easy for you to identify HOW your behaviour is going to be changed by the psychological method? (Scale 0 = I cannot easily identify how my behaviour is changed by the psychological method to 100 = I can easily identify how my behaviour is changed by the psychological method)]; 2) Estimating personal desire to change behaviour [To what extent do you want to change your behaviour through the psychological method in this particular situation? (Scale 1 = Not at all likely to 9 = Very Likely)]; 3) Likelihood of the BI impacting behaviour personally [To what extent do you think the psychological method used in this particular situation would positively change YOUR behaviour? (Scale 1 = Not all likely to 9= Very likely)]; 4) Judged acceptability of the BI [To what extent do you think it is acceptable to use the psychological method described in this context to change your behaviour? (Scale 1 = Unacceptable to 9 = Acceptable)].

Overall, what do our findings show? Overall, we found support for both predictions. Judgments in all four probes (transparency, desire to change, likelihood of impacting behaviour, acceptability) were more favourable for BIs that were transparent (compared to opaque) [Prediction 1], and only when Positive arguments for their efficacy were presented (compared to Positive + Negative, and to Negative only) [Prediction 2]. Moreover, we consistently found that Transparent compared to Opaque interventions were judged more favourable across all 4 probes in each of the 5 domains in which they were applied. There was no evidence to suggest that judgments were impact by the agent proposing the BIs (i.e. scientists, government, advertisers), suggesting that when it comes to assessing BIs, people prioritise certain properties of the communication (transparency of the interventions, positive arguments for their effectiveness) above others (who is proposing the interventions) in order to inform their judgements.

“A regulatory framework for nudging”

Wednesday 11:00 (SUITE 686).

Sarah Arduin (Trinity College Dublin).

Abstract:
This paper proposes a regulatory framework for nudge-like interventions. It distinguishes between nudges and other forms of regulatory interventions, including, but not limited to, standard-based regulation and principle-based regulation. Conceptually, a nudge is a non-price intervention that exploits decision effects. While the last few years have seen a rapid growth in nudges-like interventions in public policymaking, the case for such interventions is more nuanced than it might
appear at first glance, especially when analysed from a regulatory lens. This paper addresses the extent to which nudge-like interventions may, and should, alter the set of opportunities available to choosers. For instance, should a choice architect intervene such as to promote the welfare of an actor by, in part, revising a social norm and thereby changing the range of choices for that actor? Should she do so when the effect of such intervention is to increase the social and emotional costs associated with the decision-making process? If so, on what normative and regulatory grounds? To investigate these normative questions, the paper will outline the position of three scholars, Sunstein, Thaler, and Bernheim, before setting out a regulatory framework for nudges.

“Combining to strengthen: Psychology, policy-making and education, consumer protection, regulation, choice architecture”
Wednesday 11:00 [SUITE 686].

Vera Rita Ferreira (VERTICE PSI).

Abstract:
This article discusses five elements that, when articulated and integrated, could allow for further efficacy regarding public policy design and implementation in general, and educational initiatives, such as financial, environmental, nutritional etc., in particular. The elements are: 1. the body of knowledge generated by (economic and social) psychology and other behavioural and social sciences, that would then inform 2. policy-making and financial (or other types of) education, 3. consumer protection, 4. regulation and 5. choice architecture strategies. Each area is introduced and discussed regarding potential contributions as well as limitations, along with some examples where they have already been used in some countries. In 2019, all these areas are, if not in the global agenda at large, at least playing an increasingly relevant role in the public debate in several regions. Findings about economic mental life and behaviour, decision-making and behaviour change applied to policy-making and financial education, behaviourally informed policy-making, consumer protection and choice architecture underly this debate.

Growing evidence for bounded rationality, with its large array of cognitive and emotional limitations, as opposed to full rationality, have gradually begun to drive governments and policy-makers searching for better ways to allocate resources and help populations to the best possible decisions, with the least mistakes, in several different areas. The subprime bubble burst in 2008, triggered both deep economic recession and wider debates over the possible causes that might have been overlooked, making room for contributions going beyond mainstream economics and bringing greater visibility and respect towards the psychology-economics interface. Around that time, the Brazilian National Strategy for Financial Education, launched in 2010, was perhaps the first to include straight psychological insights in the books for high school students, at first, followed by those for elementary school, and in other initiatives as well, such as the interactive exhibit on economic psychology and financial education at the Central Bank of Brazil Money Museum, videos, online material on decision-making biases for investors, savers and consumers, along with annual conferences on behavioural science and investor education hosted by the Brazilian Securities and Exchange Commission. Around the world, it has become consensual that such insights must be part of educational initiatives, and of policy-making in general, according to major organizations and institutions (OECD, the World Bank, the British Government and others).
Consumer protection has also begun to integrate knowledge of this nature into its agenda, expanding the perspective routinely brought by lawyers and economists to include human psychology in projects and in the very constitution of their work. In the US, the recently founded Consumer Financial Protection Bureau is a clear example of this trend, although Fundação ProconSP, in Brazil, had already led a pilot project to deal with over indebted consumers that had economic psychology as one of its pillars around 2010-11.

Regulation has also been evolving towards this direction, and several examples indicate that: from the recently published IOSCO and OECD The Application of Behavioural Insights to Financial Literacy and Investor Education Programmes and Initiatives Report (2018) to Cass Sunstein’s leadership for two years at OIRA-the White House Office of Information and Regulatory Affairs, during the Obama administration, and the British Government MINDSPACE-Influencing behaviour through public policy (2013), other publications by the World Bank and OECD and much earlier, Earl’s Behavioural Economics and the Economics of Regulation, for the New Zealand Ministry of Economic Development (2005), the tendency has been clearly growing.

Choice architecture, or libertarian/asymmetrical/light paternalism (depending on the author of choice), and the ever more popular nudges, are discussed in different levels: undeniable efficacy in several realms, while falling short over more complex contexts; the pointlessness of the debate around freedom (there will always be some design in every context, whether deliberate or random); the more necessary debate over the growing attraction that nudges seem to be exerting on policymakers and public alike, whereas such strategies may not always be the most adequate solution for every problem, plus a disregard towards other tools offered by behavioural sciences for this goal, along with the potentially unfair distribution of responsibility, with ‘nudge providing’ as the final measure even when it proves to be insufficient.

Understanding mental functioning and decision-making in depth is key for: educational initiatives, not only financial, but also environmental, nutritional, fiscal, preparation for retirement and others, policy-making in different areas, such as finance, health, innovation, urbanism, environment, bureaucracy, security, and the very act of policy-making itself, and running a government; consumer protection; regulation in all its steps (formulation, implementation, supervision, disclosure, sanctions, when necessary); choice architecture, with all its complexity. With behaviour change at stake, expertise in mental operations must be present in each step of these processes. The remaining challenge – how to efficiently integrate these five elements so they render best results – is open for discussion. While some countries have already started using psychological insights in these areas, it is often the case that this may be done separately, in isolated initiatives, and without full communication and cooperation among them. At the same time, other countries are yet to acknowledge the potential contribution that may come from psychological research data and have not taken measures to use this source of reliable information, either for lack of belief on its relevancy, or sheer ignorance about this kind of resource. It may be the case that the debate about the integration of these five elements so as to make the combination stronger and more impactful should be in the agenda of stakeholders around the world as a means to advance this effort.
Abstract:
This paper presents a theoretical model that is concerned with the long-run persistence of behavioural interventions which aim at reducing the engagement in actions that cause harm to others or the society as a whole. Incorporating a moral component in the individuals’ utility function, we derive conditions guaranteeing an exogenous manipulation of other-regarding preferences to endure during upcoming decision making processes even after the intervention has ended. Applied to the contexts of fines for delays and energy conservation programs, our theory explains empirical evidence for post-interventional persistence and provides channels through which long-run effects operate. Beyond that, theoretical predictions concerning the efficacy as well as persistence of alternative mechanisms are formulated.
Gambling (SUITE 688)

“Gamblers’ behavior”
Wednesday 11:00 (SUITE 688).

Antonio Filippin (University of Milan) with Ulrich Schmidt, Miriam Tomasuolo.

Abstract:
Besides sustaining illegal activities and usury, gambling addiction is well-known for its dramatic effects that can spiral out of control. It causes health problems and financial distress that often reach dreadful consequences such as job and relationship disruptions, when not suicide attempts. The consequences of this phenomenon are not restricted at the individual level, as they end up affecting the gamblers’ social network. Also due to its exponential growth in the last decade, gambling can safely be defined as one of the most worrisome social pathologies nowadays. Even worse, pathological gambling mainly concerns the poor, and is particularly widespread among marginalized people such as low-income retired workers, unemployed, and recent immigrants.

This study implements an incentivized field experiment in a large betting agency, eliciting a wide range of behavioural traits among usual customers, i.e. a population that faces the actual and impending risk of becoming (when not already being) disordered gamblers.

The behavioural economics approach applied to potentially disordered gamblers is particularly suitable and has a double comparative advantage. First, a focused questionnaire on gamblers “in action” makes possible to measure the degree of severity of gambling disorders (using the DSM criteria) together with a battery of behavioural traits (risk, loss, and ambiguity aversion; impulsivity) and heuristics (e.g. gamblers’ fallacy), a goal that surveys of large samples of the population cannot achieve.

Second, a choice-based approach such as that of behavioural economics can highlight which behavioural traits, once validated, can be used as a screening device to detect pathological gambling at an early stage. Such a result would instead be beyond the horizon of studies involving gamblers in therapy, even adopting more in-depth methodologies (e.g. using neuroscientific tools). In this case the symptoms analysed would in fact be those of the overt disease, with no scope for policy interventions aimed at its prevention.

The paper also tries to identify causal relationships besides simple correlations. Using a within-subject approach the design manipulates exogenously the spell of time in which subjects are free to gamble between the subsequent phases of the experiment.

The project is at an advanced stage of development with the collection of the data almost completed. Preliminary evidence on the available data shows that problematic gambling is associated mostly to higher degrees of loss aversion and risk aversion in the loss domain. The experimental manipulation does not deliver clear-cut results at first glance, but suggests that the main effect of gambling activity is to reduce the differences in the behavioural traits between problematic and non-problematic gamblers.
“Equivalent gambling warning labels are perceived differently”
Wednesday 11:00 (SUITE 688).

Philip Newall (University of Warwick) with Elliot Ludvig, Lukasz Walasek.

Abstract:
Background and Aims: The same information may be perceived differently depending on how it is described. For example, food labelled as “90%-fat-free” is perceived to be healthier than the same food labelled as “10%-fat.” The risk information given on many gambling warning labels tends to accentuate what a gambler might expect to win e.g., “This game has an average percentage pay-out of 90%,”(return-to-player), rather than what a gambler might expect to lose, e.g., “This game keeps 10% of all money bet on average” (house-edge). We compared gamblers’ perceived chances of winning and objective levels of warning label understanding under equivalent return-to-player and house-edge formats.

Design: Participants were randomly assigned to see either current UK gambling warning labels or equivalent representations of the same information, across a range of average pay-outs consistent with international gambling products.

Setting: Short hypothetical online experiments.

Participants: UK nationals with experience of virtual online gambling games such as online roulette (total N = 1,006 across 3 experiments).

Measurements: The main dependent variable was a gambler’s perceived chances of winning on a 0 – 100 scale (Experiment 1), on a 7-point Likert scale (Experiment 2), and an objective measure of warning label understanding (Experiment 3).

Findings: The house-edge label led to lower perceived chances of winning in Experiment 1, F(1, 354) = 73.05, p < .001, and in Experiment 2, F(1, 378) = 62.14, p < .001. This effect occurred consistently across the range of average pay-outs used. In Experiment 3 the house-edge warning label led to a higher proportion of objectively accurate answers (71.3%) than the return-to-player warning label (46.5%, z = 3.52, p < .001).

Conclusions: The house-edge label led to lower perceived chances of winning and a higher proportion of objectively accurate answers than the return-to-player labels that are more frequently used to describe gambling product risk.

“Welfare effects of gambling”
Wednesday 11:00 (SUITE 688).

Don Ross (University College Cork).

Abstract:
We designed a slot machine interface to study gambling behaviour over real monetary amounts in a controlled laboratory environment. The interface allowed us to study the effect of multiple pay lines compared to single pay lines, the provision (non-provision) of full information about frequencies of outcomes, the effect of “near miss” displays on subjective beliefs about the chances of winning, and the effect of “wins disguised as losses” on gambling behaviour. We measured the risk preferences of
each subject, allowing for probability weighting and loss aversion, as well as the evolution of subjective beliefs of expected winnings for some subjects. Every subject also completed popular survey screens for disordered gambling, allowing an evaluation of their predictive accuracy with respect to subjects' free choices to gamble or not gambling with earnings from a previous task, over real stakes up to $1,500. All experiments were implemented for real rewards, so that responses were incentivized.

“Intergenerational cooperation: An experimental study of ageism in trust and exploitation”

Wednesday 11:00 (SUITE 688).

Dennis Alexis Valin Dittrich (Touro College Berlin).

Abstract:
Financial exploitation of trusting older adults by younger adults is the most prevalent and frequent form of elder abuse and a source of mounting concern given the increasing demands for intergenerational cooperation across greying societies. We conducted an experiment with older (>55 years old) and younger (<26 years old) adults who repeatedly played 4 versions of a centipede game (CG) within and between age-groups. We further elicit a measure for revealed social preference and a measure for backward induction reasoning ability. By altering pay-outs across 4 version of the CG we can distinguish non-instrumental from instrumental cooperative behaviour and test the following hypotheses and behavioural predictions.

Hypothesis 1 (Game theoretic null). Participants who use backward induction choose non-cooperation. P1.1. Regardless of age attributes, players will stop the game at their first chance. P1.2. Regardless of age attributes of other player, stop will be chosen at first chance. P1.3. Regardless of experience, players will continue to stop the game at their first chance. P1.4. The measure of backwards induction derived from the Race to 20 Game will explain variance in the effects predicted by P1.1, 1.2, and 1.3

Hypothesis 2 (Age effects). Some participants prefer to cooperate (un-conditionally, conditionally, or instrumentally), with average rates of initial trust and cooperation increasing with age. P2.1 Initial trust (choosing “continue” at node 1) should be more frequent among older adults. P2.2 Unconditional cooperation (choosing “continue” at nodes 1, 2, 3, 4 in the CG and NOT choosing “stop” at subsequent nodes in the same game) should be more frequent among older adults. P2.3 Exploitation behaviour (choosing “stop”, at nodes 3 or 4) and the instrumental cooperation preceding it (i.e., the prior chosen “continue” at nodes 1 or 2 that set up a trust-based relationship) should be less frequent among older adults.

Hypothesis 3 (Age interaction effects). Older adults act more benevolently (demonstrating trust and trustworthiness) when interacting with younger adults. P3.1 Initial trust (independent of target) should be more frequent among older adults when they are partnered with younger adults. P3.2 Trustworthy behaviour of older adults should be more frequent when partnered with younger adults. P3.3 Exploitation behaviour by older adults should be less frequent when they are partnered with younger adults.

Hypothesis 4. People believe that older adults have the age-related trust propensities posited in Hypotheses 2 3. P4.1 Whether for purpose of later exploitation or cooperation, younger adults
should show greater initial trust when they are partnered with older adults. Given the mixed motives of initial trust-based cooperation, the next two predicted effects are counter-directional to one another and may not emerge at the aggregate level of analysis. P4.2 Among younger adults seeking relationships with repeated cooperation (where the cooperative propensity of their partner is a requisite for cooperation), trustworthiness will be more frequent when partnered with older adults. P4.3 Among younger adults who seek personal gain over a fair endgame, exploitation should be more common when paired with older adults.

Sample All participants were German native speakers with different backgrounds and income levels. To control for possible asymmetries across sessions due to experience with similar studies, we only invited participants that had not previously participated in an economic experiment. The participants in any session were not related so that motives for helping linked to kin networks would not apply. All participants knew that only native German speakers were invited to participate in the experiment.

Half of the sample was composed of “younger adults”: participants aged between 18 and 26 years old, while the other half of the sample involved “older adults”: participants older than 55 years. Our sample consists of 162 participants from the state of Bremen, Germany. The average age for younger adults was 21.7 years old, with a median of 21 and a standard deviation of 2.1. For older adults the average was 63.8 years old, with a median of 63 and a standard deviation of 6.9.

The age difference between these two samples is representative of the age difference between parent and offspring in Germany, as of 2015 the average generation length is 31 years, and of the age difference between starting a career and retirement in Germany. The current expected German working lifetime is 38 years.

Results In sum we find some evidence of “reverse” ageism: older adults show a preference for cooperating with other older adults but not with younger adults (see figure 1), but no evidence of younger adults’ ageism or a selective exploitation of older adults. Indeed, the data is more consistent with general in-group favouritism.
“Dispositional factors affecting the choices to purchase insurance and to take mitigating measures against flooding”

Wednesday 13:30 (HOGAN 1).

Tadeusz Tyszka (Kozminski University) with Julija Michailova.

Abstract:
This study asks why inhabitants of areas exposed to the hazard of frequent flooding rarely take actions to minimize their possible losses: observation has shown that residents of flood-prone areas are often under-prepared for hazards and that they often do not buy flood insurance even when it is highly subsidized. Why do people who have systematic experience of flooding decide to remain uninsured, and why are they under-prepared for this hazard?

Previous studies show that such factors as past experience of flooding, social norms, and several other situational factors influence willingness to buy insurance or adopt other precautionary measures.

Our study focused on the role of dispositional factors which may co-determine self-protective behavior, i.e. both the decision to purchase insurance and the decision to take mitigating measures against flooding. We assumed that when a person considers buying insurance or taking mitigating measures against flooding (and natural disasters more generally) they realize that they will incur immediate costs if they buy insurance, but the potential benefits – the reduction of losses in the event of a disaster – are both uncertain and delayed. These two characteristics suggest that two crucial dispositional factors which may have an impact on self-protective behavior could be individual attitudes towards risk and differences in time orientation.

Members of our focus group were inhabitants of rural areas, small towns or suburbs, who were owners of houses or ground floor apartments. We applied a quota sampling technique using the following criteria: (1) whether an inhabitant was an owner of a house or ground floor apartment; (2) whether the owner was aware of the flood threat in their area; (3) whether the household was able to buy insurance; (4) whether a person actually took the decision as to whether to buy insurance in the household. The data set consisted of 332 complete observations, 158 males and 174 females. To measure risk attitudes the standard procedure of Holt and Laury (2002) was used. To measure time preference a procedure based on that of Voors et al. (2012) was used.

We found that two dispositional factors – risk aversion in the domain of losses and time discounting rate – were predictors of the decision to acquire flood insurance. Risk aversion in the domain of losses is a positive predictor of decisions to acquire flood insurance. The more impulsive individuals are, the less eager they are to buy flood insurance. These two conclusions accord with the decision theory approach to explaining risky human behavior. The decision to purchase insurance against a loss entails incurring immediate certain costs to avoid or reduce higher uncertain and delayed losses in the event of a disaster. Thus, we could not have expected anything else other than, that individual attitudes toward risk and individual discounting rates (impulsivity) would co-determine this decision.
While our hypotheses about the relationship between two dispositional variables – risk attitudes and time discounting rate – and purchasing flood insurance were supported, we did not find support for analogous hypotheses concerning decisions to use mitigating measures. We should also add that there was no support for the idea that a relationship exists between the decision to take mitigating measures and flood risk perceptions, although such relationship was present for the decision to purchase flood insurance. How might we explain this lack of relationships between the adoption of mitigating measures and dispositional variables such as risk attitudes, time discounting, and flood risk perceptions?

Instead of attitude towards risk, factors such as a higher income level and being more worried about the possibility of flooding were significantly related to the taking of protective measures. Obviously, a higher income level allows an inhabitant of an endangered area to spend more money on adopting mitigating measures. Similarly, greater worry about possible flooding will motivate an individual to adopt mitigating measures. Thus, these types of factors, rather than risk perceptions or dispositional factors such as risk attitudes or time discounting rates, seem to have a significant impact on protective behaviour.

“**Myopic behaviors, time inconsistency and present biased preferences in the intertemporal renewable resources harvesting**”

*Wednesday 13:30 (HOGAN 1).*

*Marco Persichina (Department of Forest Economics, SLU - CERE, Centre for Environmental and Resource Economics - Umea, Sweden).*

Abstract:
This work focuses on the effects of myopic behaviours in the intertemporal management of resources. The introduction of the assumption of non-constant discount rate in the harvesting models has offered the opportunity to demonstrate how present biased preferences undermine the wise management of renewable resources. In this framework, this paper analysis the dynamics generated by myopic behaviours due to the present biased preferences both in the individual setting and in the collective one. In the individual context the focus is posed in the welfare of the single naive agent and in the action of a single social planner. While in the collective dimension, the analysis includes also the social behaviour of the agents and their social and other-regarding preferences. So, this work draws a theoretical framework that explains the myopic behaviours of agents engaged in intertemporal harvesting decision-making processes in environmentally-relevant contexts.

“**Pre-testing a home energy advisory report for residential home upgrades**”

*Wednesday 13:30 (HOGAN 1).*

*Marek Bohacek (Sustainable Energy Authority of Ireland) with Andrew O’Callaghan, Karl Purcell.*

Abstract:
Ireland is currently under pressure to meet carbon emissions targets set by the European Commission. In Ireland, overall energy use increased by 0.5% in 2017 despite large investments in
energy efficiency programs. Residential energy use, of which over 60% is used for space and water heating, represents a large portion (22%) of the total Irish energy demand (SEAI, 2018). It has been estimated that over 50% of Irish residential dwellings are significantly energy inefficient and Ireland’s housing stock is amongst the poorest performing in Northern Europe (Ahern et al., 2013). As such, increasing the energy efficiency of the housing stock is recognised as one of Ireland’s largest energy efficiency challenges. To achieve the energy efficiency targets for the residential sector outlined in the National Energy Efficiency Action Plan (NEEAP, 2017) the completion of retrofits will need to increase, both in number and depth.

The focus of the current paper is to pre-test a behaviourally informed re-design of the Home Energy Advisory report (referred to as Advisory report in the remainder of the text) that aims to increase the number and the depth of energy retrofits completed in Irish residential dwellings. The Advisory report has been part of the Building Energy Rating (BER) assessment that is required to be carried out on all newly built, sold and rented properties since 2006 (S.I 666).

The Advisory report is a customised report created for each home by a Building Energy Rating Assessor and contains information on the current building performance across the main elements of the home (heating system, roof insulation, wall insulation etc.). To date, it had contained a list of recommended upgrade measures as well as a list of simple low cost energy saving measures but had not contained energy efficiency measure packages or details about the costs and comfort benefits associated with each measure. As such, the advisory report was limited in the information that it provided to homeowners.

The re-design of the advisory report contains additional information including: a recommended energy efficiency package specific to the dwelling; information on the potential BER of the dwelling; the potential improvement to main dwelling components displayed on a simplified scale (Very Poor to Very Good); the estimated cost of the upgrade measures; the amount of grant funding available; approximate bill savings; potential CO2 savings; and comfort benefits (on a 1 to 5 scale). The redesign also includes behaviourally informed elements such as augmented social norm messaging, loss aversion framing, and simplification.

The experiment described in this study aims to pre-test the effectiveness of these elements in influencing homeowner’s willingness to invest in efficiency measures. The experiment aimed to estimate households’ willingness to pay for energy efficiency measures to determine the optimal setting for the cost of the recommended energy efficiency measure package. For example, if the Advisory report suggests a package that is deemed by the median household to be “too expensive”, the number of households encouraged to retrofit by the advisory report might be low. In contrast, if the Advisory report suggests too few measures many dwellings might be retrofitted but the retrofit might be shallower.

Computerized laboratory experiments were carried out to answer the following research questions: What is the average monetary amount people are willing to invest after being presented with a personalized Advisory report? Does the amount people are willing to invest vary depending on demographics, current BER, inclusion of augmented social norm, etc.? Does the amount people are willing to invest differ when presented with a generic (non-personalized) report compared to personalised report? How much attention do people pay to different aspects (e.g. potential savings, investment costs) of the report?
To create personalised Advisory reports without having to carry out BER assessments on participants’ dwellings, the BER database which contains data for over 800,000 dwellings was analysed. A series of questions that best predict a dwelling’s BER but are also answerable by participants were identified. These questions related to: House type, period of construction, number of stories, perceived size of the dwelling, type of heating system, completed retrofits to-date, current BER if known, and perception of the dwelling’s coldness (proxy for a level of insulation). With this information the experimental paradigm was able to approximate the current BER of participants’ dwelling and calculate a potential BER assuming various combination of retrofit measures (e.g.: Attic insulation, external wall Insulation, low energy lighting etc.).

To vary the cost of investment (the depth of retrofit) across participants, a random yet plausible combination of measures were selected. The paradigm then estimated all values (e.g., cost, savings, etc.) of the report and presented the report to participants. After participants finished reading the report they were asked how likely (on 7-point Likert scale) they were to invest in the retrofit package suggested by the Advisory report and if they would invest none, part, all or more than the report suggested. Participants were also asked a series of recall questions about various parameters from the report followed by demographic questions.

The first experiment was carried out in laboratory on a random sample of Dublin homeowners (n=156). The second experiment was carried out during the National Ploughing Championships 2018 on a random sample of Irish homeowners (n=103). The second experiment differed slightly from the first. It did not ask any of the recall questions and half of the participants (control group) were presented with generic information about dwelling retrofits followed by an example of a retrofit package. The retrofit packages selected for the control group were matched with the packages selected for the experimental group.

The results from the first experiment found that the average Dublin homeowner is willing to invest (selected likelihood of investment 5 or higher) between €10,000 and €20,000. However, the willingness to invest varies by the starting BER of the dwelling. Homeowners living in better insulated dwellings are less likely to be willing to invest. Female participants were found to be willing to invest more compared to male participants. Qualitative feedback collected indicated a positive response to the advisory report and the overall recall of different aspects of the report was good. Overall, the findings indicated a need for further research into the drivers of household’s willingness to invest in energy efficiency measures.

“The role of present bias and transaction costs in the take-up of residential energy-efficient technology”

Wednesday 13:30 (HOGAN 1).

Leonhard Lades (University College Dublin) with Peter Clinch, Andrew Kelly.

Abstract:
Governments worldwide try to accelerate household investments in energy-efficient heating technologies at scale. Investing in these technologies can save money for the household and reduces the environmental impact of heating. Nevertheless, many households do not make these investments even after policy interventions to reduce market failures and rather wait until their
heating system stops working. This paper suggests a combination of present bias over effort and transaction costs as an explanation: Present-biased households prefer to make arrangements for installation tomorrow over today. In the extreme, this procrastination can lead households to never make the investment. We formalise this intuition, calibrate the model using Irish building energy rating data, and present an ex-ante quantification of the effects of different government grants. We find that ignoring transaction costs and present bias can lead governments to overestimate the effectiveness of financial grants and show that re-allocating some money from the financial grant to measures that reduce transaction costs can increase the effectiveness of government policies.
“Do some financial product features negatively affect consumer decisions? A review of evidence”

Wednesday 13:30 (HOGAN 2).

Féidhlim McGowan (Trinity College Dublin) with Pete Lunn.

Abstract:
This research, funded by the Central Bank of Ireland, reviews international evidence on consumer decision-making in retail financial markets. Specifically, we identify and evaluate research from multiple disciplines and methods that links specific features of products to the quality of consumer decisions. The focus of the review is the most common financial credit products that fall under the remit of general consumer financial regulation: credit cards, personal loans and mortgages. The review concludes by reflecting upon some common themes encountered across product types and noting that there is a case for closer integration of empirical evidence and financial regulation.

The working definition of product “feature” in this review is deliberately broad, encompassing not only specific attributes of the product but also emergent properties of the product and how the product category presents itself to the consumer. Thus, where a product contains many attributes, perhaps increasing the likelihood that a key attribute is ignored by the consumer, the resulting complexity counts as a feature of the product. Where a product is sold with certain attributes made explicit and others less so, the difference in salience is considered a feature of the product. Where a disclosure presents key product information this disclosure constitutes a feature of the product. A distinction is drawn between disclosures and provider-specific marketing claims, the latter not being counted as product features.

The review concentrates on studies that associate features of the product with the quality of consumer decision-making. Criteria used to make inferences about whether decisions are good or bad include: the choice of a dominated product, consistency of decision-making, explicit knowledge or comprehension about a product, and decisions not aligning with theoretic predictions. In addition, the review highlights studies that link the product category with a specific behavioural phenomenon in general. This type of evidence, while not directly addressing the issue at the heart of the review, nevertheless provides an important empirical backdrop for interpreting those studies that do. Similarly, there are relevant studies that demonstrate links between certain financial product features and particular subsets of consumers, with implications for the quality of decision-making. These too are important to include, because a product feature may attract consumers for whom the product is not financially suitable.

Credit card consumers struggle both to control spending on their cards and to comprehend the dynamics of repayment of credit card debt. Convergent evidence from multiple methods indicates that minimum repayments on bills act as anchors, lowering repayments and hence increasing levels of debt and associated costs. A conservative estimate of the lower bound is that this phenomenon affects 10 per cent of credit card customers – the figure could be substantially higher. By the same process, credit limits affect the behaviour of individuals that are not credit constrained as they are treated as a signal about future earnings. Consumers often fail to factor in less salient product
features, such as fees, into their decisions. This may be because they are not aware of them, pay insufficient attention to them, or are too optimistic about avoiding them. The regulatory restrictions on fees in the CARD Act has been of substantial benefit to consumers.

The literature on consumer decision making over personal loans notes similar predispositions to those documented in credit card consumers. Consumers’ insensitivity to interest rates is suggestive of a tendency to underweight attributes that are less well understood in decisions; for consumers of loans, APR is often not analogous to price. The multi-attribute nature of a loan may exceed cognitive capacity. Two strands of evidence support this view. First, in a large field experiment, superficial aspects of loan advertisements altered demand by the equivalent of one quarter of the interest rate. Second, experimental evidence suggests consumer preferences over loans are highly malleable. Manipulating which co-determined loan attributes are made explicit leads to widespread choice inconsistencies. For high-cost payday loans, presenting costs in cash terms increases the likelihood of choosing a lower cost option.

For mortgages, the evidence indicates a clear link between two aspects of product design and disadvantageous consumer decision-making. First, evidence from multiple methods suggests that overall complexity of mortgage products means that key properties, such as rate changes and penalties, can be misunderstood or ignored by consumers. Introductory offers on mortgages have the potential to cause consumer detriment too. Experimental evidence also suggests that this salient mortgage feature may be more enticing when consumers are experiencing decision fatigue. Moreover, the affordable initial monthly repayments attract present biased consumers who do not necessarily consider the long-term repayment schedule after the reset rate. Advertising and empirical evidence indicates that these consumers are often specifically targeted by sellers of these mortgages.

The review shows that some features of financial products consistently cause consumers difficulty. A common theme among the findings is that where financial products have multiple features consumers struggle to take into account all the attributes that matter for their financial outcomes. The evidence suggests a need to keep everyday financial products simple. Where more complex products are available, behavioural research provides methods for testing them to ensure that they can be properly evaluated and understood by the consumers they are designed to attract. As such, consideration should be given to a requirement to pre-test some financial products and product features. Such pre-tests might help to ensure that innovative financial products offer genuine value to consumers.

“Improving borrowing decisions in the field”
Wednesday 13:30 (HOGAN 2).

Arnoud Plantinga (Netherlands Authority for the Financial Markets) with Patricia de Jonge, Ilva van der Grajt, Alexandra van Geen.

Abstract:
Does the way a borrowing decision is presented influence actual borrowing behavior? We present insights from three field experiments in collaboration with a Dutch provider of consumer credit. We test whether changes to the choice architecture of the loan application form affect borrowing
behavior. Specifically, we are interested in two aspects of the choice architecture: the anchoring effect, and changes that could make people more actively think about their repayment amount and repayment period. We discuss the results, their implications, and our experience in running field experiments in collaboration with a financial institution.

A vast amount of literature on the anchoring effect suggests that giving people a numerical reference point can cause their choices to be closer to that reference point (Tversky & Kahneman, 1974). We test whether an anchor affects the amount consumers want to borrow and the monthly repayment they choose. In Experiment 1, we test an anchoring effect for the amount people apply for. We test both the effect of a different anchor and of removing the anchor altogether, creating an active choice condition (Carroll, Choi, Laibson, Madrian, & Metrick, 2009). In Experiment 2, we test an anchoring effect for repayment amount, again testing different anchors and an active choice condition.

In addition to anchoring effects, we are interested in whether making consumers think more actively about their repayment conditions influences their decisions. In Experiment 3, we test two ways to focus consumers’ attention on the repayment. First, we direct attention to the repayment period by changing the question “How much would you like to repay monthly?” to “In how many months would you like to repay?” Research by the Behavioural Insights Team (2018) suggests this might lead to higher repayments. In addition, we change the user interface for selecting a repayment amount, building on research showing differences between a slider scale and a text box (Thomas & Kyung, 2018). Does removing the slider scale, forcing consumers to use a text box to select their repayment amount, influence their choices?

“Helping consumers repay their credit card debt: insights from behavioural experiments”
Wednesday 13:30 (HOGAN 2).

Maura Feddersen (Financial Conduct Authority) with Chris Burke.

Abstract:
Intervening at the point of direct debit setup:
We study consumer responses to a randomised field experiment on credit card debt repayment. This intervention shrouds the option to automatically pay the contractual minimum at the end of each pay cycle. This increases the salience of the other automatic payment option: cardholders can select a fixed monthly payment, which is typically more than the contractual minimum. The intervention results in a very large increase in the amounts consumers select for automatic payment. However, it has no effect on other, more important outcomes: total debt repayments (including both automatic and non-automatic – ie manual – payments), credit card spending, borrowing costs or debt net of payments. These null effects arise primarily because consumers in the treatment group offset their increased automatic payments by reducing the value of their (infrequent) manual payments. The intervention also causes a modest reduction in consumers selecting any type of automatic payments, which leads to a small increase in arrears.

Intervening at the point of manual repayment setup:
Building on Stewart (2009), we conduct a hypothetical credit card payment experiment to test an intervention to de-anchor payment choices. This intervention effectively stops consumers selecting
payments at the contractual minimum. It also increases their average payments, as well as shifting the distribution of payments. By de-anchoring choices from the minimum, consumers increasingly choose the full payment amount – which potentially seems to act as a target payment for consumers. We are able to evaluate the potential external validity of our experiment and find that hypothetical responses are closely related to consumers’ actual credit card payments.

“Official advice improves mortgage-holders’ perceptions of switching: Experimental evidence”

Wednesday 13:30 (HOGAN 2).

Shane Timmons (Economic and Social Research Institute) with Martina Barjakova, Pete Lunn, Terence McElvaney.

Abstract:
For the typical consumer, purchasing a mortgage is the largest credit decision they will make. While they may search for low interest rates initially, the length of repayment terms and complexity of mortgages and interest rates can mean that consumers end up paying more in the long-run. A willingness to refinance with another provider (“switch”) to avail of cheaper interest rates during the lifetime of the mortgage is hence important, from both a consumer welfare perspective and for the functioning of competitive markets, but switching rates are low.

We present an experiment motivated by a change in regulatory policy in Ireland to promote transparency in switching. An addendum to the Consumer Protection Code (2012), announced in the summer of 2018, stipulated measures to, for example, notify consumers on variable rate mortgages whether they have the potential to move to cheaper interest rates. Another stipulation in this regulation change was to require lenders to provide consumers with a link to a specific advice webpage hosted by the government agency responsible for enforcing competition and consumer protection law in Ireland (the Competition and Consumer Protection Commission). This website provides comprehensive information about the switching process and contains tools to help consumers to find cheaper interest rates.

We worked closely with the consumer protection body to design an experiment to test the information they provide to consumers. Primarily, our aim was to determine whether the information that consumers would be directed to under the above policy change has the potential to affect their perception of switching offers. In the experiment, we tested whether reading the consumer advice altered how a sample of mortgage-holders evaluated switching offers for hypothetical mortgages, how they perceived the transaction costs of switching and how they perceived their own competence to make these judgements. For each of these factors, we assessed the impact on willingness to switch.

Our findings suggest that advice that informs consumers about the important features of switching offers and provides them with details of the switching process can significantly alter how they perceive switching. After reading the consumer advice, the mortgage consumers in our experiment became more sensitive to large gains in interest rates, began to factor in the repayment term and were less discouraged from switching by their perception of the process. They were also more confident in their ability to judge mortgage offers. Although our experiment was motivated by a change in regulations in the Irish market, the findings have relevance for markets elsewhere and
highlight the potential of soft regulatory changes to help consumers make more informed decisions about mortgages.

“Financial homo ignorans - Development of the scale measuring behavioral ignorance in the financial context”

Wednesday 13:30 (HOGAN 2).

Kinga Barrafrem (Linkoping University) with Gustav Tinghog, Daniel Vastfjall.

Abstract:
In order to make sound financial decisions, individuals (i) need financial knowledge to navigate through the complexities of financial world, (ii) and they need to act accordingly on this knowledge. While extensive work has been conducted on increasing financial literacy among people, little is known about individuals’ propensity to attend to the relevant financial information and other factors in financial decisions. Thus, to help people make better financial decisions it is essential to identify why, when, and who makes suboptimal financial decisions due to their behavioral ignorance. This study sets out to design an instrument to measure exactly that. To this end we develop and validate Financial Homo Ignorans scale that measures the extent to which individuals neglect various relevant decision-making factors in everyday financial decisions.

We use the concept of behavioural ignorance (both deliberate and unintentional), defined as disregard of relevant decision factors, consequences, or deciding at all, to describe the mechanisms behind suboptimal financial decisions. Building on previous work we hypothesize that the phenomenon of limited attention and behavioural ignorance, well-explored in psychology, is amplified in the financial decision context due to high complexity and uncertainty of decisions. According to our conceptual framework people may be characterized as Financial Homo Ignorans (FHI) to a certain degree. The taxonomy of Financial Homo Ignorans is based on six key behavioural biases: i) decision avoidance, ii) information avoidance, iii) aggregation bias, iv) opportunity cost neglect, v) motivated reasoning, and vi) over optimism. We hypothesize that people are not equally likely to neglect various decision factors across all situations. In turn, there are circumstantial factors and individual differences that make behavioural neglect in the financial domain more or less likely. Further, individuals can exhibit only some types of ignorance while attending to other types of information. For instance, some individuals might check their account balance systematically, but ignore opportunity costs when choosing how to use their money.

The Financial Homo Ignorans scale is divided into six subcomponents that identify individual levels of susceptibility to each of the above-mentioned key biases. The scale was constructed in two stages. In the first stage, we developed the items measuring each of the constructs based on theoretical concepts that were tested on a sample of 507 individuals from Swedish population. The survey also included measures of financial literacy, financial self-efficacy, financial behaviour scale, financial well-being, propensity to plan, mental accounting, and personality characteristics (Big Five) to test the validity of the FHI scale. Based on the exploratory factor analysis and content validity criteria, we have reduced the number of items on each subscale to three. In the second stage, we have administered the final version of the scale together with a set of financial decision tasks in a survey with a sample of over 2000 individuals from Swedish population. We conducted confirmatory factor analysis to examine the psychometric properties of the instrument.
Our results show that individuals differ in the extent to which they can be characterized as Financial Homo Ignorans. Furthermore, higher ignorance (as a general construct but also specific types of ignorance) is negatively related to relevant constructs for sound financial decision-making such as financial literacy and financial self-efficacy. In addition, individuals with higher FHI score tend to engage less frequently in desirable financial behaviour (e.g., paying bills on time), as well as show lower financial well-being. Thus, the Financial Homo Ignorans scale identifies individuals who struggle with financial ignorance which can help in raising the efficiency of targeted interventions aiming at improving financial decisions and enhancing financial well-being.
"Grandparents matter: Perspectives on intergenerational altruism and a pilot intergenerational public good experiment"

Marianna Baggio (Università degli Studi di Trento) with Luigi Mittone.

Abstract:
The development and use of long-lived public goods involve more than one demographic generation, leaving the classic literature on voluntary provisions partially untold to explain complex phenomena such as welfare systems, climate policies and major infrastructure projects. This paper proposes an experimental approach that can be used to further investigate how a public good is produced by one generation of individuals while the next reaps its benefits. Within this framework the case of intergenerational public goods production is explained using a spill over rule, where a percentage of the public good produced in time t by experimental parents will integrate the endowment of their artefactual children in t+1. A cascade mechanism allows also for the rebirth of three generations of players, mimicking the biological and anthropological mechanisms of gene transmission and intergenerational altruism. Experimental evidence shows that subjects who are prompted on their lineage membership tend to contribute more compared to those who are not included in a dynastic framework. More importantly, results reveal that the true dynastic background of individuals is a prominent influence in the levels of contribution towards public goods.

“All I have to do is dream? The role of aspirations of children, parents and teachers for intergenerational mobility”

Reto Odermatt (University of Basel) with Warn N. Lekfuangfu.

Abstract:
Recent debates on intergeneration inequality have identified key driving factors that undermine intergeneration mobility, namely genetic inheritance, financial constraints, and intergenerational transmission of tastes and aspirations. In this paper, we study the role of aspirations in childhood and adolescence in shaping adult outcomes and therefore intergenerational persistence of achievement in life. Using the well-established 1958 UK’s National Child Development Survey, we create an alternative measure of intergenerational mobility – the aspiration intergeneration correlation. It enables us to investigate how intergenerational persistence might have been had childhood aspirations been completely fulfilled. We find that the aspiration measure is lower than the actual intergenerational correlation, meaning that the intergenerational mobility under a hypothetical, aspired context being higher than mobility taken from reality. Our study also finds that aspirations set by mentors (parent and teacher) for the child are key drivers of actual future outcomes- career and education attainment. We observe that children from under-privileged backgrounds also set future aspirations lower than their peers, with the patterns are found much early on in life. Intergenerational transmission of low aspiration, over and above innate ability and financial barriers, play a key role in preventing higher social mobility.
“Slippers and shirt. The long term effect of inequality of opportunity on human capital”
Wednesday 13:30 (NALLY).

Davide Bellucci (University of Turin).

Abstract:
Inequality of opportunity (IoP) is widely recognized as a limit to the socio-economic development of a country. It creates distortion in the optimal allocation of resources and discourages the accumulation of human capital. Furthermore, the effects of IoP might also persist over time because of the broadly documented intergenerational transmission of parental background. We aim at understanding how the interplay between IoP and family characteristics influences investment in education and work participation. We hypothesize that individuals weight return-on-circumstances and return-on-effort when making such investment decisions. Using Italian data from the Survey on Household Income and Wealth (SHIW), we show that respondents who at age 18-22 happened to live in high IoP regions and in high socio-economic status (SES) families, display lower accumulation of years of education and do not show higher work experience in adulthood. If return on circumstances outweighs that on effort, the incentive to accumulate human capital vanishes for individuals from high SES households. Results have strong implications in terms of redistribution of opportunities and welfare policy.
Preferences 4 (DAVIN)

“Age-related differences in risk tolerance and susceptibility to asymmetric dominance effect”
Wednesday 13:30 (DAVIN).

Maciej Kościelnia (SWPS University of Social Sciences and Humanities, Faculty in Poznan, Poland).

Abstract:
Older adults are victims of common aging stereotypes. They are perceived as risk-averse, susceptible to many consumer manipulations, likely to commit simple cognitive errors and unable to adapt to new tasks and challenges. The prevalence of those stereotypes is unjustified in the light of scientific research which clearly shows that the efficiency of older adults’ functioning is well preserved till the very late age. Moreover, thanks to multiple compensatory mechanisms, older adults can outperform their younger counterparts in resisting common cognitive biases (e.g. the sunk cost effect) and in learning from experience. Our research has focused on the age changes in susceptibility to one of the most common cognitive biases in decision making, namely the attraction effect. This phenomenon refers to preference reversal after introducing the irrelevant, asymmetrically dominated option to the choice set. This “decoy” has power to increase the popularity of a dominant (“target”) option, which clearly violates the paradigms of classical economics. We wanted the replicate the existing findings that older adults are less susceptible to this mechanism and to examine their behaviour in risk and uncertainty domain. 90 younger adults and 90 older adults were invited to take part in the laboratory study with a novel roulette task, designed by us to investigate decision preferences and susceptibility to the attraction effect. Contrarily to aging stereotypes, we have discovered that older adults, compared with younger ones, were more prone to risky choices and that the susceptibility to decoy manipulations was comparable in both groups. The only aspect of decision making in the task that suggests age-related impairments in decision making was a higher rate of choosing decoys (dominated options). The results of the study are going to be discussed in the light of dangers related to stereotyping (e.g. stereotype threat) and lifetime changes in efficiency of decision making.

“You should think in a foreign language if you want to take more risk! The role of thoughts valence and regret anticipation”
Wednesday 13:30 (DAVIN).

Rafal Muda (Maria Curie-Skłodowska University) with Boaz Keysar, Paweł Niszczota, Damian Pieńkosz.

Abstract:
Aim
Processing information in a foreign language causes people to make different decisions than processing it in a native language (the foreign language effect; Keysar, Hayakawa, & An, 2012). More precisely, using a foreign language makes people less emotional and reduces decision biases. Previous research demonstrated that using a foreign language changes the way how we make moral judgment (Costa et al., 2014a), how we perceive the illusory correlations (Gao et al., 2015), and how we make risky decisions (Keysar, Hayakawa, & An, 2012). However, research on the effect of foreign
language use on risk taking demonstrated mixed results. Keysar, Hayakawa & An (2012) and Costa et al. (2014b) found that people are more likely to take risks when using a foreign language, but Hayakawa et al. (2019) found only partial support for this idea. All those studies used financial decision making such as gambles. It is possible that this prior research did not show a reliable effect because it relied on emotionally-poor contexts. Here we used an emotionally evocative problem concerning fetal testing during pregnancy (Ritov & Baron, 1995) that might allow a more immersive experience, thereby facilitating vividness of the situation and eliciting emotional reactions (Hayakawa & Keysar, 2018). Our goal is to investigate if the foreign language effect is consistent under these circumstances, and to attempt to explain it. In three pre-registered experiments, we tested whether the foreign language effect affects risk-taking, and whether this relationship is due to (1) shifts in anticipated regret and (2) differences in the recall of associations related to the decision situation.

Method
544 Participants had to decide between a safe prenatal test and a prenatal test that had some advantages but included the risk of causing a miscarriage. Participants had to state the maximal probability of a miscarriage that they were willing to accept so that the risky prenatal test would be preferable. The risky test had the benefit of detecting abnormalities that affected a larger number of foetuses (i.e., 6 out of 1000 foetuses instead of 3 out of 1000 foetuses in the safe prenatal test).

Participants also indicated the level of regret that they would feel if they encountered an adverse outcome (Experiments 1-3) and followed a procedure of thought-listing regarding the level of risk involved (Experiment 3). More precisely, after writing down all thoughts that came to mind as they made the decision, participants self-coded each of those thoughts: (1) whether it referred to the risky test, the safe test, or neither (2) whether it referred to positive aspects, negative aspects or neither. Positive thoughts focused on risky test and negative thoughts focused on safe test created the risk-increasing category as they should enhance the attractiveness of risk-taking. Negative thoughts focused on risky test and positive thoughts focused on safe test created the risk-decreasing category as they should reduce the attractiveness of risk-taking (Johnson, Häubl, & Keinan, 2007).

Discussion
In all studies, the results robustly show that people are more risk-taking when using a foreign language. Our findings in the matter of regret were mixed: participants in the foreign language condition anticipated less regret only in Experiment 3. This might suggest that to some extent, increased risk-taking in a foreign language results from attenuation of anticipated regret. The second evaluated mechanism received more support by the data. It suggests that people are more prone to think about positive aspects of risk-taking when using a foreign language, which results in generating more thoughts increasing attractiveness of risk-taking. Importantly, results revealed that the number of risk-increasing thoughts was positively connected to willingness to take the risks. This suggests that the increased risk-taking propensity in a foreign language might arise due to differences in the recall of associations related to the decision situation (i.e. people focus more on positive aspects of situation when using a foreign language). This is the first demonstration that language-dependent thought retrieval has a prominent impact on risk-taking.

The proposed mechanism is in line with preferences-as-memory approach, stating that preferences are not stable across situations and sometimes are constructed on the basis of retrieved memories (Weber & Johnson, 2006). More precisely, when making a decision, people consult their memory
recalling the similar experiences, and on the basis of decisions that have led to a successful outcomes, choose one of the alternatives. Importantly, when consulting their memory, people consider both positive and negative aspects of choice alternatives, and usually, these aspects are retrieved being grouped by valance (e.g. negative aspects are considered first then the positive ones emerge). However, given that emotional memory is attenuated in a foreign language (Baumeister et al., 2017), it is possible that representations of past experiences differ depending on used language.

When considering previous experiences in the native language, it is easy to recall positive and negative associations and consequences of past decisions, and naturally put more weight to the negative features (as predicted by the negativity bias, Rozin & Royzman, 2001). However, when using a foreign language, due to the inhibited accessibility to emotional memory and attenuated emotional connotations (Pavlenko, 2005), it might be harder to recall the exact valance of specific aspects of past decisions. This in turn, might make stronger emotions (i.e. negative) dampened (or alternatively, these emotions are less primed), thus, people have more space to think about positive aspects of decision situation.

The observed mechanism of different access to thoughts between the foreign and native language is in line with a recent study by Hayakawa and Keysar (2018), showing that using a foreign language reduces the vividness of mental imagery, with significant consequences on behaviour. The authors proposed that reduced mental imagery results from reduced access to episodic memories. As our results revealed that the thoughts generation was not disrupted in a foreign language (i.e. there were no differences in the number of listed thoughts between languages), it might be not the result of a limited ability to construct memories per se but rather of considering different aspects of decision situation when using a foreign language.

“Do people harness deliberate ignorance to avoid envy and its detrimental effects?”

Wednesday 13:30 (DAVIN).

Andreas Orland (University of Potsdam) with Lisa Bruttel, Werner Güth, Ralph Hertwig.

Abstract:
Envy is an unpleasant emotion. If individuals anticipate that comparing their payoff with the (potentially higher) payoff of others will make them envious, they may want to actively avoid information about other people’s payoffs. Envy may also trigger behaviour that is detrimental to welfare. Again, if individuals anticipate that they will react in this way, they may avoid information about other people’s payoffs from the outset. With the help of experiments, we analyse to what extent individuals use deliberate ignorance to avoid both, being envious and reacting in a destructive way. We set up subjects as pairs of two, one potentially envious subject and a second subject who solely serves as a potential attractor of envy by receiving either a high or a low endowment. In three treatments, we manipulate whether the potentially envious subject can avoid information, and whether he or she can costlessly deduct from the attractor’s endowment. In an post-experimental questionnaire, we administer three psychological scales that may explain this deliberate ignorance. We find that thirteen percent of our potentially envious subjects avoid information when they do not have the opportunity to deduct. Our results show that these scales do not explain deliberate ignorance. We also do not find that subjects who avoid information deduct less than the subjects who were forced to observed the high endowment.
“Confirmation bias and markets for information”
Wednesday 13:30 (DAVIN).

Sean Ferguson (University of Edinburgh).

Abstract:
If consumers of information suffer from confirmation bias, they may prefer a biased information source to a perfectly accurate one. This is a potential explanation for the existence of biased reporting in news media. I show how confirmation bias can be expressed in terms of utility derived directly from the relationship between a consumer’s prior and posterior beliefs, and that this can induce preferences over signals. I derive the optimal signal for consumers, both when their preferences are entirely dictated by confirmation bias, and when an instrumental value of information is also present, showing that in each case consumers may prefer biased signals. When audience-maximising firms compete to offer information sources to consumers with these preferences, I show that the strategic environment is equivalent to a one-dimensional location game, and that results analogous to those in the existing literature on location games extend to this setting: in duopoly, the firms locate at the median of consumer preferences, but spread out as the number of firms rises.
Social behaviour 8 (SUITE 679)

“Residential discrimination and trustworthiness”
Wednesday 13:30 (SUITE 679).

Ondřej Krčál (Masaryk University).

Abstract:
Research question and method
There is some evidence that people are discriminated based on where and how they live (see e.g. Golabek-Goldman, 2016; Bonnet et al., 2016). This paper combines a field experiment and a laboratory experiment to test the presence of residential discrimination in the labour market and to study a possible mechanism behind the discrimination.

In the field study, we sent 1,347 job applications (short cover emails with CVs) to 449 calls for low-qualified front-desk jobs in Brno, Czech Republic, during 2018. The CVs differ in two aspects: in the address signalling the quality of neighbourhood and housing (three versions), and in the quality of the applicant (high and low job fluctuation). The CV study has a 3×2 treatment design. The quality of neighbourhood and housing was measured within-call. We sent three CVs to every call, one has an address of a flat in a good neighbourhood, one a flat in a bad neighbourhood and one of a dormitory room in a bad neighbourhood. The quality of the applicant in these CVs was randomly varied. We measure the response rate, i.e. whether there was any positive reply to the email with the CV. To any positive response, we immediately responded that the applicant is no longer interested in the job offer.

The evidence from the field study was complemented with a laboratory experiment conducted with 160 students at the MUEEL laboratory in Brno in March 2018. The subjects were senders in a trust game played with participants of a randomized-controlled trial with homeless families (Rapid Re-Housing project) that started in Brno in Autumn 2017. The Rapid Re-Housing project was aimed at families (mainly mothers with children) in housing need in the city of Brno. Out of the population of around 420 families, 50 families were randomly selected into the treatment group and received a rental contract for a municipal flat and social services mainly related to their new housing situation, while another 100 families were selected into the control group with no housing or social assistance. Student subjects in the lab experiment were shown a truthful description of their trust-game receiver family, which included information about the number of children, income and housing situation. While the other aspects remained the same for all receivers, the variation consisted in the housing information. Senders were told that the receiver families lived either in a dormitory, or in a standard municipal flat, or they used to live in a dormitory but got a rental contract for a municipal flat (for which they did not need to meet any conditions or requirements). The decision screen also contained description of the housing types. While the municipal flats are apartments of standard quality, in dormitories the family typically lives in one low-quality room with kitchen and bathroom shared with other inhabitants of the dormitory.

In the laboratory experiment we measure not only the amount sent (one of these discrete choices 0, 30, 60, 90, 120, 150 CZK), the students are also asked about how much money they expect a family that received 180 CZK (60 CZK was sent) would send back. Each student fills out 4 different tasks: 2 amounts sent and 2 expectations. One of these tasks is randomly selected, paired with the data from
the receiver family and paid out to students. If expectations were selected for payment, people received a prize if their guess was close to the real amount sent back. The difference between dormitory and flat is measured within-subject, i.e. each student is asked about the amount sent and expectations for a family living in a flat and in dormitory. The information whether the flat was granted by the city is randomly assigned, i.e. measured between subject.

Results
In the field study, we find that a relatively large and statistically significant effect of the neighbourhood. The response rate is by 25% higher for applicants in a good compared to a bad neighbourhood (the response rate of 0.185 vs 0.149). The difference between the flat and the dormitory in a bad neighbourhood is small (a 6% increase compared to dormitory) and not statistically significant at the 10% level. This could be because most people on the job market who live in dormitories are long-distance commuters who use dormitories only during the week (i.e. it signals time flexibility rather than of anything else), so it is possible that the word “dormitory” in the address of the CV did not provide a sufficient signal about the housing situation of the applicant. This study shows that the first-stage screening process of the job market reacts to the neighbourhood the applicant lives in, the laboratory experiment studies whether housing conditions affect people’s trustworthiness, which might be one of the explanation for the differences in the response rates.

Trustworthiness in the lab experiment is measured by the expected amount returned. We find that people expected that families in dormitories would send 34 CZK less than families living in flats and about 23 CZK less than families who used to live in dormitories and now live in flats. This shows that housing affects senders’ expectations about the trustworthiness of the receivers. They react not only to the difference between dormitories and municipal flats (within-subject) but also to the previous history of flat owners: families who lived in a dormitory and received municipal flat without any additional requirements are less trustworthy.

The findings of this paper suggest that people’s trustworthiness is affected by their housing status and that differences in housing status might have an impact on the success of workers in the labour market.

“Investment proficiency and unit trust awareness of young retail investorsy in Malaysian urban city”

Lalua Rahsiad (Management & Science University, Malaysia) with Muhammad Aliff Marhalim, Putrie Amierra Jaffar, Sumaiah Muhamad.

Abstract:
Based on the Personal Wealth’s Young Investor Survey 2016 by The Edge, only 7 per cent of the respondents invested more than 30 per cent of their monthly income while 45 per cent only allocate 5 per cent or less of their monthly income for investment. This study was conducted to assess the financial literacy affecting unit trust investment planning of young professionals in Subang Jaya to find the causes of the lack of investing. Thus, an explanatory research design has been employed. Our target population was young professionals in Subang Jaya specifically in SS15. A modified questionnaire was developed and divided into two parts. The first part covers demographic
variables. The second part covers financial literacy factors affecting the unit trust investment planning by young professionals in Subang Jaya. 220 young professionals were chosen as a respondent from different sectors in Subang Jaya. The data collection was carried out by distributing the questionnaire. Cronbach’s Alpha and multiple linear regression were selected as the statistical tool to analyze the quantitative data. The results indicated that the financial literacy of the young professionals was found to have a significant effect on unit trust investment planning. Decision-makers ought to have adequate levels of financial knowledge and skills to achieve optimal outcomes in this complex decision-making environment. The call for enhanced financial literacy amongst consumers is a global phenomenon, driven by the growing complexity of financial market and products. The study recommends for further study into the effect of non – financial factors on the process of making unit trust investment decisions.

“The impact of moral reasoning, moral identity and retaliation on whistleblowing behavior: An experimental study”
Wednesday 13:30 [SUITE 679].

Sabrina Schäfers (Paderborn University) with Behnud Mir Djawadi.

Abstract:
Organizations and legislators increasingly recognize that whistleblowing is beneficial for the organizations’ economic success by identifying and improving unsafe products and working conditions, restricting fraudulent behaviour, or protecting organizations from reputation damage and costly lawsuits (Keenan 2000). However, these desired effects are often not achieved due to the fear of retaliation, involving e.g. job termination, discrimination and harassment (Rehg et al. 2008; Rothschild/Miethe 1999). Nevertheless, taking the risk of retaliation, some employees still report organizational wrongdoing and become whistleblowers. Therefore, the question arises to what extent distinct individual whistleblower characteristics affect the likelihood of whistleblowing under the threat of retaliation.

Research regarding individual factors, such as demographic and job-related variables, to date yields largely inconsistent findings (Cassematis/Wortley 2013; Vadera/Aguilera/Caza 2009). Emerging research building upon concepts from moral psychology in turn reveals personality traits that seem to favour whistleblowing (e.g. Bartuli/Djawadi/Fahr 2016; Bjørkelo/Einarsen/Matthiesen 2010). Therefore, in this research, we apply two concepts from moral psychology often associated with ethical behaviour in organizations: moral reasoning and moral identity. Moral reasoning is the “process by which individuals deal with moral conflicts” (Derry 1989) including the individuals’ definition, framing, evaluation, and resolution of the conflict. Individuals can be assigned to different levels of moral reasoning referring to mental schemas that are activated when individuals deal with moral conflicts (Rest et al. 1999). It is assumed that individuals high in moral reasoning judge moral dilemma situations based on ethical principles instead of personal interests or organizational roles and are therefore more likely to become whistleblowers. The concept of moral identity internalization is suggested to close the motivational gap between moral reasoning and actions. It refers to the extent that being a moral person is important to an individual’s identity (Aquino/Reed 2002) and that higher moral identity internalization leads to whistleblowing behaviour.
Since no study to date has jointly analysed these two concepts regarding whistleblowing behaviour, we investigate moral reasoning and moral identity as possible predictors of whistleblowing under two different levels of retaliation. Higher costs of retaliation are in this context hypothesized to decrease the likelihood of whistleblowing.

To analyse the impact of moral reasoning, moral identity and retaliation on whistleblowing, we design an incentivized laboratory experiment combined with a questionnaire. In the questionnaire, student participants completed the so-called DIT-2 as a measure of moral reasoning (provided by the centre for the Study of Ethical Development, University of Alabama) and a moral identity scale (Aquino/Reed 2002). Two weeks later, they participated in a laboratory experiment in which they were confronted with real wrongdoing and whistleblowing situations. Particularly, always two student subjects are paired-up as manager and employee, forming a division of an organization. To simulate organizational behaviour in the lab, the division works on a joint real effort task and receives a team payoff. After three periods, we implement a situation in which wrongdoing occurs. The experimenter allocates a donation budget earmarked for a real charity and asks the manager to confirm the transfer of the money. The manager can decide to confirm the transfer as requested, or to embezzle the money. We see this embezzling action as wrongdoing, because the donation budget is totally independent from the subjects’ earnings, and the money has already been earmarked for the charity, so that the manager’s action can be interpreted as stealing money from the charity. The employee observes this wrongdoing and can either remain silent and financially benefit from the manager’s fraudulent action or report the embezzlement. Reporting and hence blowing the whistle is associated with the following consequences: (1) the money that was embezzled in the current period is donated to the charity, (2) the manager and employee work alone in all following periods, (3) the manager’s and employee’s payoff in the current and all following periods is reduced. In treatment 1 “low retaliation”, it is reduced by 1 token each. In treatment 2 “high retaliation”, the payoffs are reduced by 3 tokens.

Overall, 188 student subjects participated in both the questionnaire and the laboratory experiment. Subjects either scoring high or low in the questionnaire were assigned the role of the employee, while subjects scoring on average scales were assigned the role of the manager. This sorting procedure made sure that we can compare whistleblowing vs. non-whistleblowing decisions of employees with high and low levels of moral reasoning, respectively.

Our experimental study finds that the investigated variables moral reasoning, moral identity, retaliation and whistleblowing are closely linked to each other. The results suggest that moral reasoning alone has an effect on whistleblowing when the associated retaliation costs are the lowest, while high moral reasoning and moral identity together lead to immediate whistleblowing as the most ethical option (and costliest option for the employee). Retaliation negatively affects the whistleblowing decision if costs are sufficiently high.

Our study delivers first experimental evidence on the impact of moral reasoning and moral identity on whistleblowing behaviour, and how retaliation decreases the likelihood of whistleblowing. Besides investing in measures to increase compliance behaviour, organizations might be advised to also invest in ethics programs built on integrity. This would have the potential that employees commit to ethical aspirations and solve the morally sensitive conflicts they encounter more on ethical principles (e.g. by reporting wrongdoing). Further, future research should focus how the
organizational support for whistle-blowers can be increased in order to reduce the fear of retaliation that prevents whistleblowing to happen more often than currently observed.

“Should I stay or should I go?’: Seeking a social identity in the labour market”
Wednesday 13:30 (SUITE 679).

Chiara Natalie Focacci (University of Bologna, Erasmus University Rotterdam, University of Hamburg) with Pak Hung Lam.

Abstract:
The number of unemployed and inactive individuals reached dramatic rates in the last decade. Active labour market policies were implemented so as to increase this group’s skills and their job opportunities. Notwithstanding, the number of people who do not participate in training and other formation services measures is still high. In this paper, we hypothesise there is a behavioural motive behind it. In this regard, we provide a model that studies the belief-dependent decision-making process of a potential participant who accounts for both his preference and the social expectations of agents such as his peers or the government in respect to active labour market policies. The latter are intended as a key instrument for the individual not only from an economic perspective. In particular, they grant to the individual the opportunity to transform his social identity by joining the group of the working people. Theoretical results are discussed as well as the findings of a survey carried out at international level.
Panel discussion on “Applying behavioural insights in policymaking: Experiences from practitioners”
Wednesday 13:30 (SUITE 686).

Sabrina Artinger (Federal Chancellery, Germany); Aletta Boele (Ministry of Economic Affairs and Climate, The Netherlands); Joana S. Lourenco (Joint Research Centre, European Commission); Malte Petersen (Federal Chancellery, Germany); Shabnam Mousavi (Max Planck Institute).

Abstract:
Behavioural economics and behavioural sciences as a whole have created a sound body of evidence that helps us better understand human behaviour. Yet the transfer of this knowledge to policymaking and its successful application in concrete projects is far beyond trivial. Science and administration are expert systems that operate within professional cultures and routines which are often not compatible.

Scientific evidence is mostly produced in a long time-frame, under strictly controlled conditions and focused on very particular questions or target groups. Policymakers, in contrast, mostly work in short time-frames and have to design programs for contexts where boundary conditions cannot be controlled, and target groups are as heterogeneous as entire populations. Legal regulatory requirements, ethical considerations and the multi-stakeholder decision processes in democratic systems are additional points at play when creating new policies.

As a result of these different working modes there exists a considerable gap between generation of scientific evidence and application of the knowledge to policymaking in administration. Successfully applying behavioural insights in policymaking thus requires an endeavour to overcome this gap on both sides.

Session Description: Applying Behavioural Insights to Policy
In this session, practitioners who work at the intersection of behavioural science and policymaking will present a variety of examples of policy applications of behavioural insights. Their presentations involve both the actual and potential promises of applying behavioural insights to policymaking, and the obstacles they have experienced in the course of implementing of their projects. These aspects are discussed from the angle of science as well as policymaking. Concluding remarks consist of explicit points of experience from involvement in the process of behaviourally informed policy design, and ideas on how to seamlessly share and use these experiences to improve evidence based and behaviourally informed policymaking.

Active participation of the audience will be stimulated to bring to bear all minds in the room and their expertise in the pursuit of closing the science-practice gap in the policy domain.
“Exploring the internal and external drivers of knowledge workers' productivity in mobile settings”

Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Alessandra Abeille (Imperial College London) with Nick Chrissos, Jacek Pawlak, John Polak, Aruna Sivakumar.

Abstract:
The interaction between transport and productivity has been long-standing. Only relatively recently, however, travel time has been recognised as having an increasingly productive potential (Lyons and Urry, 2005). Yet the associated empirical efforts have so far treated the notion of travel time productivity rather simplistically, resulting in a superficial understanding of its meaning within the broader work and lifestyle arrangements or its drivers, especially the technological ones.

In the conventional and still dominant transport modelling approaches the primary sources of utility, or equivalent metrics of ‘usefulness’, have been associated with activities at the destinations (Mokhtarian, 2009). The travel time, on the other hand, has remained seen from the perspective of passenger transport, as ‘wasted’. Despite the early theoretical and empirical recognition of limitations of this convention, only in the early 2000s the phenomenon of productive travel time re-emerged in the mainstream transport discourse (Lyons and Urry, 2005). This re-emergence has been attributed to proliferation of mobile Information and Communication Technologies (ICT), which extended the possibilities for undertaking productive activities while traveling (Axtell, 2008).

From a different research perspective IT and Management studies have tried to assess the effect of mobile working on personal productivity using self-reported questionnaires. While a number of studies have relied on rather simplistic productivity measurements, literature is starting to recognize thematic areas of impact for mobile work (Ahmed 2014).

Previous research in psychology provides theory about mobile working being affected by psychology mediators as communication, motivation and the long discussed private-work life balance (Gajendran, 2007).

Although this interdisciplinary evidence exists, so far the studies have relied on rather crude interpretations of travel time productivity. In fact little has been uncovered by means of specific activities, conditions and technologies that make the individuals see themselves productive in particular mobile contexts.

To address this gap, the present study systematically analyses 22 semi-structured interviews collected among employees of Cisco, a global IT company. The context of Cisco is especially relevant as the company actively encourages its employees to use technology to participate in work flexibly, from any location. The interviews cover three thematic areas: the current practices of work in mobile settings, the meaning of being productive and the role of technology. To enrich the insights, the interviewees have been stratified to capture variation in terms of level of seniority and professional role.

The results obtained so far present a picture in which a mobile worker undertakes a very careful planning in terms of the expected activities, length of the particular work tasks to be undertaken, or
use of equipment, including technology, in order to maximise productive output. The individuals consciously evaluate suitability of particular planned work tasks to expected conditions on the chosen modes of transport, e.g. constraints on use of technology. In this fashion a number of the interviewees indicated sensitiveness to disruption of the connectivity on airplanes:

“Because of the lack of connection, you have to make a detailed planning of the activities [to perform on the airplane]”

Characteristic that appears to be appreciated:

“I dive in, it’s like my uninterrupted time”

Furthermore, the level of detail in planning has been found to be surprisingly substantial, re-ordering tasks to achieve the longest possible, uninterrupted period for a task requiring concentration. One of the interviewees reported:

“The cart service has gone through and no one is going to bother me for the next two hours”

Another common feature among the respondent was concern about privacy, showing sensitivity to co-travellers overlooking the screens or overhearing:

“I have privacy screens, key board mufflers, fake outs, all the stuff that prevents people to be looking at my screen”

Such considerations would restrict the activity types, potentially hampering the productivity while travelling.

Lastly an interesting pattern emerges when looking at the interaction of those tasks. A number of individuals would report their days to be more productive when tasks of similar nature, but not necessarily of similar content were undertook consecutively. For instance back to back meetings were considered effective although they were different in content:

“Monday was the most productive day, I had a series of meetings, external meetings and internal meetings. Having access to the phone I could access one meeting after the other”

Overall, the insights gathered so far reveal a complex set of interactions between more strategic considerations and instantaneous conditions, intertwined by heterogeneous role of technology as determinants for productivity. There is also an inter-individual and intra-individual interpretation of the concept of productivity, depending on particular work-related contexts, information of which are not routinely captured in surveys describing travel time use or productivity.

While we expect to see some factors of productivity to be shared among the sample, different groups of individuals start to be defined. For instance, individuals with more structured perception of their work and the progression of the objectives over a long period of time appear to have lower tolerance for mobile work. Oppositely individuals with a higher variability in their work tasks tend to appreciate and search more for opportunities of mobile work. Nevertheless these differences tend to smooth when higher levels of seniority are reached. While we acknowledge that this sample could be biased towards intense technology use, we expect the current research to offer recommendations with respect productivity appraisal frameworks for knowledge workers in mobile settings.
“False perceptions of quality signals for exercise professionals the danger of asymmetric information an application of Akerlof’s market for lemons model”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Hannah Altman (Queensland University of Technology) with Rob Roberges and Benno Torgler.

Abstract:
In this paper we engage in an in-depth examination of the New Zealand (NZ) health and fitness industry with a focus on the implications of asymmetric information and institutional design for consumer behaviour and thereby for one aspect of wellbeing. We apply Akerlof’s theory on the market for lemons where the role of asymmetric information on consumer behaviour is examined using a theoretical narrative exemplified in the used car market with regards to consumption of used cars. We apply this modelling to the market for exercise professionals along with examining the potential negative externalities on health outcomes caused by asymmetric information. For our empirical analysis, we scrape data on the health and fitness industry with respect to REPS (Register of Exercise Professionals). These data allow us to sort exercise professionals based on their education level. We develop an original ranking scale of the quality of exercise professionals as an analytical tool and to help minimize asymmetric information for consumers based on the level of education (if this protocol is adopted). Based on this scoring we can determine that the higher the level of education the lower the chance that they are registered with REPS and the lower the level education the higher is the probability that they are registered with REPS. This is statistically significant at a 5% level; but it is also substantively significant. Based in the data collected, we can conclude that REPS is actually a negative marker of quality when quality is being measured by years of education. REPS actually provides false signals to consumers on quality and therefore has negative effects on consumers health and wellbeing. This is a critical finding as in NZ, REPS claims to be and is believed to be the ideal marker for quality as regards to signalling quality to consumers resulting in choices of trainers that can generate poor health outcomes to the consumer with negative externalities to the health of New Zealanders and NZ’s public health system. Also, this misleading signalling mechanism also disincentivizing investing sport training-specific human capital reducing the supply of quality health professionals, generating further negative externalities to to the health of New Zealanders and NZ’s public health system.

“Overconfidence: The role of gender and public observability”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Hayk Amirkhanyan (Faculty of Economic Sciences, University of Warsaw) with Bokszczanin, P., Krawczyk, M., Wilamowski, M.

Abstract:
In this project we manipulate public observability of forecasts and outcomes of a task (crucifix hold) to explore how it affects overconfidence (OC). Participants of the experiment are asked to hold a weight after predicting how long they think they could hold it. Comparing these two numbers yields a measure of OC. We run four experimental conditions in which we vary the observability of the forecasted time and the actual outcome: Private Forecast & Private Outcome; Public Forecast & Private Outcome; Private Forecast & Public Outcome; and Public Forecast & Public Outcome.
There are several cognitive processes that could potentially be affected by public observability. First, while males are expected to be more OC than females (Barber & Odean, 2001; Croson & Gneezy, 2009) irrespective of the condition, we can expect the difference to be particularly large under public forecasts, with females avoiding shame and males willing to appear confident (Cialdini & Goldstein, 2004; Ludwig, Fellner-Röhling, & Thoma, 2017). Additionally, the desire for accountability and consistency would make participants adjust their statements and behaviours (Lerner & Tetlock, 2003; Grawe, 2007). For instance, if under public forecasts a male participant would make a higher prediction, he would also adjust and try to perform relatively better (than under private forecasts).

Moreover, under public outcomes (compared to private outcomes) the performance of both genders is generally expected to be higher. The reason might be that public recognition could improve performance (Gerhards and Siemer, 2016). So, under public outcomes participants seeking recognition and trying to look strong and fit would improve their performance. Then again, wishing to behave consistently and be accountable under public outcomes individuals would also report higher forecasts.

Data collection (among high school and university students in Warsaw, Poland) is in progress. Currently, with 148 observations, we are unable to detect any significant treatment effect. By the time of the conference, however, we intend to collect at least 400 observations in total.

“Environmental engagement, religion and spirituality in the context of religious disaffiliation”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Marie Briguglio (University of Malta) with Teresa García-Muñoz, Shoshana Neuman.

Abstract:
The relationship between religion and environmental attitudes/behaviour has long been philosophically debated. One question receiving scholarly attention in quantitative social science is whether Judeo-Christian religions have an inherently negative effect on environmental concern, given their premise that humanity has dominion over nature, or conversely whether they stimulate environmental protection, given their ethic of stewardship.

Empirical results are diverse, and the relationship seems to vary in size and direction, depending on definitions and the method of investigation adopted. But an important phenomenon which has received far less attention (arguably because it is harder to measure) is that of spirituality, within/out the context of a religion. The phenomenon seems to be growing in empirical relevance in Western societies as more individuals move away from institutionalized, formalized (and perhaps compromised) forms of religion.

This paper contributes to the literature by examining the prospect that spirituality offers an important predictor of environmentalism, employing nationally representative data (n=1,057) from Malta, a predominantly Roman Catholic European Union country where religious participation is in decline. The dataset includes measures of religiosity, spirituality, environmental engagement and relevant socio-economic co-determinants.

Our findings confirm the usual co-determinants of environmental engagement (e.g. education) and detect a positive link between some types of environmental engagement and religious engagement.
We further find spirituality, whether or not combined with religious participation to be a strong predictor of environmental engagement. In the context of increasing religious disaffiliation, the prospect that spiritual processes are linked to environmental engagement may be a positive one for improved environmental outcomes.

“Cheating evaluation modulated by time pressure in the matrix task”

*Tuesday 12:30 (HOGAN MEZZANINE FOYER).*

Vitor Campos (University of Sao Paulo) with Jose Lino Oliveira Bueno, Mauricio Valle Barra.

Abstract:
In the study of dishonesty in behavioural economics few studies have evaluated time as an essential factor for any decision making. Time pressure is a very important variable in decision making because, since acting honestly or dishonestly involves evaluating the costs and benefits of a given action, the time taken to assimilate this cognitive process directly affects the choice to be made. There are no papers in the literature that study dishonest behaviour on a time pressure extension greater than that of seconds. The objective of this study was to determine if cheating groups at time pressures of two and a half, five and ten minutes, which could cheat at the Matrix Task, reported that they had completed a larger number of matrices than non-cheating groups under the same temporal conditions, but without the possibility of cheating on the task. The experimental design aimed to study time pressure in the scale of minutes in order to measure how more extensive time pressures, which do not require an automatic response to decision making, would modulate dishonest behaviour. Thus, the proposal was to broaden the discussion about the cognitive processes that are involved in choosing dishonesty deliberately. Ninety-two participants were separated into groups without cheating and cheating groups. In the Matrix Task, participants in the non-cheating groups, received a test sheet and an answer sheet. The test sheet contained 20 matrices, each with 12 decimal numbers. The participants had 2.5; 5; or 10 minutes, depending on the group allocated, to find two numbers, per matrix, which added up resulted in ten. One Brazilian Real was paid for each matrix that the participant claimed to have solved. At the end of the task time, the participants counted the number of matrices that they solved, wrote it on the answer sheet and took the sheets to the experimenter, who checked the numbers and paid them. The participants in the cheating group, performed the same task. However, at the end of the task time, they counted the number of matrices they solved, ripped the test sheet and discarded it. After that, they returned to their seats and wrote down the number of matrices resolved on the answer sheet. They then gave the answer sheet to the experimenter, who paid them without verification. The participants of the cheating groups, considering all the temporal pressures, reported to have solved more matrices than the participants of the non-cheating groups. The participants in the cheating group stated that they had solved more matrices, considering the means per minute, than the participants in the non-cheating group, both under the 5-minute pressure. The results corroborate the literature that evaluated cheating using the Matrix Task under the 5- minute time pressure, demonstrating that participants act dishonestly when they have the opportunity to do so. However, it was found that the same does not happen under the time pressures of 2.5 and 10 minutes, indicating that the temporal pressure modulates the dishonest behaviour of the individuals in different ways, depending on the extent of the time pressure evaluated. The results of the
experiments show that in order to study the dishonest behaviour and the modulation of time pressure, it is necessary not only to evaluate this behaviour by comparing two groups: one of high time pressure and one of low time pressure. Instead, comparisons should be made between groups under various time pressures to observe how dishonest behaviour occurs in different ways under very distinct time pressures over time. In addition, it was shown the importance of interpreting time pressure as a variable that can be studied in different lengths of time. Evaluating dishonest behaviour under time pressures of a few seconds provides important data on automatic responses of individuals when they have the possibility to cheat. On the other hand, when studying time pressures on the minute scale, it is possible to reach different conclusions about dishonest behaviour, even though the manipulation is occurring in the same variable: the time pressure. In addition to time pressure, it is argued that the perception of cheating and even the financial return generated to the participant are variables that must be taken into account in the experimental design of future articles that aim to evaluate the relationship between cheating and time pressure for decision-making.

“Explaining adherence to the gluten-free diet for celiac and non-celiac people”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Maurizio Canavari (University of Bologna) with Magda Osman.

Abstract:
In the recent years consumers are adopting more healthy lifestyles and are becoming more concerned about food choices. According to Angus & Westbrook (2018), the compound annual growth rate for the category “Free from Gluten” has the largest growth for the period (2012-2017); the US, Italy and the UK are the most important contributors to this growth.

One of the main reasons for these trends is the growing number of people following the gluten-free diet (GFD). To date, GFD is the only treatment for celiac disease (CD) (Trier, 1998). However, apart from celiac patients, in the recent years, non-celiac people are also embracing the GFD. Firstly, GFD has been considered as a treatment option for other conditions (Mahadev, Gardner, Lewis, Lebwohl, & Green, 2015). Secondly, family members of celiac people are following GFD in order to avoid food contamination at home (Bogue & Sorenson, 2008). Finally, other people who do not have any specific symptom are recently following the diet, mainly influenced by non-celiac celebrities who consider the GFD as shape keeper and energy giver (Ranker, 2015).

However, to date, research has not shown that GFD should be considered as a better diet option for the general population that does not suffer from any specific condition or disease (Gaesser & Angadi, 2012).

Considering the above facts, it is relevant to understand adherence to GFD by studying the behaviour of celiac and non-celiac people. Therefore, the aim of this study is to identify the factors affecting adherence to GFD, by considering celiac and non-celiac people, followers of the GFD. Moreover, it is necessary to understand factors affecting intentions of non-followers to start following GFD.
Theoretical background/Literature review
To date, a limited number of studies have applied behavioural models aiming to understand and improve adherence to GFD. Dowd, Jung, Chen, & Beauchamp, (2015) applied the Protection Motivation Theory (PMT) to understand adherence to GFD. However, the authors did not consider subjective norms, which according to Kalgren, Reno, & Cialdini (2000) are important for explaining the behaviour. Moreover, Sainsbury et al., (2015) have applied the TPB to explain adherence to GFD from part of celiac patients. They found that the TPB is a good tool for predicting adherence to GFD. Nevertheless, TPB has limited capacity to change and/or improve the behaviour (adherence to GFD) (Fishbein, 2008). However, Integrative Model (IM) and the Multi Theory Model (MTM) states that they have overcome these barriers. According to IM intentions do not always predict behaviour and sometimes people do not act according to their intention (Fishbein, 2008). In addition, MTM considers the behaviour as a function of two moments, first the initiation of the behaviour change and second, the continuation of the change (Sharma, 2015).

Hence, our main objective is to explain adherence to GFD by considering constructs of theoretical model.

Methods
The survey was designed in accordance with results of a systematic review (Xhakollari, Canavari, & Osman, 2019) and the necessary constructs of the IM and MTM. Figure 1 show the structure of the questionnaire. The survey was approved by the Bioethics Committee of the University of Bologna, since some of the questions are considered as sensitive.

Data collection
The survey was designed and administered using the online survey service Qualtrics. The online survey was conducted from May to August 2018. Participants were recruited through social-media, events dedicated to CD and through visits to supermarkets and specialised stores where they were given leaflets with the link of the survey. Participation was voluntarily and from the beginning subjects were informed that they were not going to receive incentives for participating in the study.

Data analysis
Data were analysed using R 3.5.1. Firstly, descriptive analysis was carried out in order to understand the general profile of the participants and a description of adherence to GFD, Depression and Anxiety level and QOL. Secondly, prior to the estimation of the models, correlation tests were applied in order to understand if constructs of the model correlated to each other. Ordered logit model, was applied for the estimation of the theoretical models, IM and MTM.

Results
A total of 308 respondents completed the survey. The majority of participants were female (80.19%) and the average age of respondents was 39 years old. Most of respondents have University Degree (49.03%). Average household income was between 1.500 - 2.500 €/month.

Adherence to GFD was measured in two ways, self-adherence and scored adherence. Results from both scales were merged and create a new variable, which presents the adherence to GFD from all the subjects of the study. The new adherence variable has 3 levels, where 1= do not follow a GFD, 2= follow the GFD with mistakes and 3= follow a strict GFD (Table 3).
Results on IM are shown in table 4. As it is observed, factors affecting adherence to GFD are related to attitudes towards GFD, injunctive norms, self-efficacy and background factors such as knowledge and attitudes towards GF products.

Regarding continuation model, our analysis found that none of the factors explain the continuation of the GFD. Thus, we can’t confirm any of the hypotheses we put forward in this study regarding continuation model.

On the other hand, concerning the initiation of the GFD, we applied it only for non-followers of the diet. In this case the dependent variables was not the adherence to GFD but intentions of subjects to start following the GFD, measured in a 5-point scale. Results are shown in table 5. As it is observed, people who think that following a GFD helps to maintain a healthier diet and helps you to be more active physically tend to agree with the fact that they might start following a GFD. Hence, believes play an important role for non-celiac people who think to follow a GFD.

“Nudging for Innovation”

Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Graziela Di Giorgi (Independent Consultant).

Abstract:
The intersection of behavioural economics studies and innovative practices in organizations reveals a series of discoveries about how our mental model impacts our predisposition to innovate, as well as the environment that surround us.

Based on an extensive qualitative research, I started to design answers for some frequent asked questions, such as: Which are the main barriers that keep us from innovating? Does our mental model influences our inner ability to innovate? Why, even valuing creativity is so hard to creative ideas get approved? And, is there anything we can do to start practicing an innovative mindset? The findings of this fieldwork that I conducted with 75 CMOs in Brazil resulted in a book - The Iguana Effect (O Efeito Iguana, only available in Portuguese version), in which I explore the large role culture context plays on people’s willingness to innovate, by understanding how our mental model works.

The foundation to this writing journey started on my inner curiosity of asking why: Why do CMOs, despite of recognising the power of creativity, do not approve the most creative ideas? After 10 years of working experience in marketing research, I was motivated to unveil some hypothesis that came up while studying behavioural economics. The answers did not stop in the already known ‘What-we-say-is-not-what-we-really-do’. To translate what was told on those interviews, I used behavioural economics lenses, allowing me to design interesting findings enlightened by our cognitive, social and emotional biases. In a practical way, I could better understand the tensions an executive goes through, while suffering internal corporate-pressure to be assertive (error free), fast (short term vision) and effective (risk aversion, consensus). Those pressures, not surprisingly, empower our inner biases while judging disruptive-risky-creative ideas.

In that approval journey I could envision 5 clear steps that is needed to get an idea approved in basically any hierarchized company. The further you climb the ladder, less creative becomes the
original idea. Each step is illustrated by identified biases that work to remove all the risks the creative idea might carry on, instead of stimulating its ingenuity and uniqueness.

After understanding what keep us from being creative, I worked on the analyses of innovative cases, and successful start-ups to find out common practices that can be stimulated in corporate cultures. I organized those practices in nudges that can help us from our own mental model diluting the side effect that biases play against innovation. So, opening a space to a more disruptive mindset in our culture, or lives. What keeps you from innovating, and how can we innovate more effortlessly for ourselves and for any organization?

“Work, money and academic dishonesty: what feeds tolerance to informal practices in students?”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Elena Druica (University of Bucharest) with Rodica Ianoyle-Călín, Răzvan-Mihail Papuc, Irena Munteanu, Călin Vălsan.

Abstract:
The acknowledgement of increased degrees of dishonest behaviour within organizations has lately become more and more prevalent in the media. The labels range from counterproductive work behaviors (Fox et al., 2001) to workplace crimes (Vadera & Pratt, 2013), with a large variability concerning typology, determinants and impact. The common thread lies in their generic detrimental effects: losses of billions of dollars and weaker levels of organizational performance (Dunlop & Lee, 2004; Cohen, 2018). Given the compelling negative consequences of workplace dishonesty, the task of identifying appropriate predictors that can be addressed through interventions at organizational level is of a great interest both for theoreticians and practitioners.

Our research looks into long-term predispositions that may determine tolerance to various informal practices. To conceptualize informality, we used two types of attitudes: how one agrees with actively bending different social rules, and how one tolerates, in a passive manner, behaviours involving piracy.

The importance of our research is threefold. Firstly, we pursue to examine whether a certain preoccupation with money can mediate the tolerance towards two expressions of informality. The approach mimics the experimental framework that illustrates the effects of money priming on pro-social behaviors (Vohs et al., 2006, Gąsiorowska & Helka, 2012, Vohs, 2015), but employs data collected through a traditional survey. Secondly, we explore the relationship between inclination towards academic dishonesty and inclination to engage into informal behavior. This is supported by previous research showing that individuals with higher tolerance to bending rules have less ethical impediment to unethical behavior, even having a higher propensity to accept and be involved in such behavior (Lavalle et al., 2008; Cho and Kirwin, 2007). The manner in which the attitude toward work relates to one’s inclination to informality is the third dimension in our research.

We used PLS – PM analysis conducted in Warp PLS and R, to estimate contemporary relationships (Joreskog and Wold 1982) among our variables, and a sample of 504 respondents, age 18 – 25 (mean 19.82, sd = 1.55), students in various university centres across the country.
“Choice architecture engages norms to influence pro-environmental choices”

*Tuesday 12:30 (HOGAN MEZZANINE FOYER).*

Catalina Estrada-Mejia (Universidad de los Andes) with Carlos Andres Trujillo V, José Antonio Rosa.

Abstract:
Almost twenty years since Robbins (1999) argued for the need to alter consumption behaviors, helping individuals make pro-environmental decisions remains a focal goal for decision making scholar in various subfields. Instead of investigating intrinsic factors such as motivation (De Groot & Steg, 2010; Axelrod & Lehman, 1993) or commitment (Lokhorst, Werner, Staats, Van Dijk, & Gale, 2011), we focus on external influences that nudge people along environmentally friendly paths. More specifically, we investigate the effect of activating either social or personal norms for choosing sustainability-friendly products, and if one possible way for such activation is nudging. Thus, in four experiments we make norms salient by altering choice architecture (Shafir, 2012; Banerjee & Duflo, 2011).

Experiment 1A
Methods overview and participants: This experiment tests choice architecture interventions where decision information about the products is manipulated to influence product choice. Either personal norms or social norms were made salient in the different conditions before participants were asked to choose between an eco-friendly paper notebook and a regular paper notebook. 139 undergraduate students were randomly assigned to a social-norm condition, a personal-norm condition or a control no-norm condition.

Results: In the personal-norm condition 61% chose the eco-friendly notebook and 39% the regular notebook (z = 2.88, p < .003). In the social-norm condition, the choice proportion was 50% and 50% (z = 0, p = 1) and in the no-norm control condition the proportions were 53% and 47% (z = .91, p = .35).

Experiment 1B
Methods overview and participants: This study test whether Experiment 1A findings replicate when participants indicate their preferences by how much they are willing to pay (WTP) for the eco-friendly paper notebook instead of choosing between the options. 130 undergraduate students were randomly assigned to social-norm, personal-norm or control conditions.

Results: Average WTP for the eco-friendly notebook was $2.92 (S.D = $1.7) in the personal norm condition, $2.32 (S.D = $1.5) in the social norm condition and $2.35 (S.D = 1.6) in the control condition.

Experiment 2
Methods overview and participants: In Experiment 2 we focus specifically on personal-norm activation. It tests whether pro-environmental product choices are more likely either when the product is embedded in a strong pro-environment product set (such as would be found in environmentally-safe product displays in stores) or when the product set is pro-environmentally weak (e.g., environmentally-safe products distributed throughout, testing the connection between specific choice architecture techniques and norm types in order to nudge sustainable product choices throughout the store). 80 undergraduate students were randomly assigned to one of two conditions: strong-environmental-product set vs. weak-environmental-product set.
Results: In the strong-environmental-product set condition, 41% chose the eco-friendly notebook and 59% the regular notebook ($z = 2.34, p = .01$) while in the weak environmental set condition 56% chose the eco-friendly notebook and 44% chose the regular notebook ($z = 1.49, p = .18$).

Experiment 3
Methods overview and participants: We focus now on social norms. For that, we test another choice architecture intervention, one that makes social norms salient by suggesting that the participants’ behaviour would be subject to approval or disapproval from peers. 40 undergraduate students were assigned to the experimental condition of their WTP for the eco-friendly notebook being made public. As control, we used the same control group of Experiment 1B, where WTP was asked without any manipulation.

Results: Average WTP was $2.37$, almost identical to that of the control group ($2.32$) suggesting that making offers public to the experimenter and other participants had no effect on WTP.

General Discussion, Implications, and Limitations
Our findings indicate that it is possible to nudge people to choose pro-environmental products by making personal norms salient without attempting to change people’s values, but not by making social norms salient; and the results were consistent for choice and willingness to pay tasks. Our results highlight the transformative potential of managed choice environments. We open a pathway for producers and policy makers to increase sustainable consumption without direct attempts to influence people’s dispositions.

“Do we study values of participants or their imagination? A qualitative study of perception of dishonesty experiments”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Nikola Frollova (University of Economics, Prague) with Petr Houdek.

Abstract:
The subject of our interest is internal and external validity of experiments. We expected participants to perceive a decision context of a cheating experiment differently than experimenter’s descriptions and conclusions. We used the focus group method after carrying out a laboratory experiment about cheating and self-selection into an environment that allows cheating. Our result suggests that participants often perceive both control and observed interventions differently than defined by an experimenter, for example, participants chose an option based on lack of trust in anonymity of an experiment or one of the tasks was perceived as more entertaining to participate in than the other. For that reason, results of experiments about cheating may not be valid and interventions to promote honesty based on them may not work. For this reason, it is important to do more qualitative research to understand choices of participants in experiments and take more into account contextual sensibility of experimental designs.
**“The Money illusion influence on decision-making under uncertainty”**

**Tuesday 12:30 (HOGAN MEZZANINE FOYER).**

Fedor Golubev (Laboratory of Economic Behavior of the Center of Psycho-Economic Researches of SVRIA a branch of RANEPA) with Vladislav Dolgov, Alexander Neverov.

Abstract:
Today the science has big data array disagreement between the facts of real economic behaviour (irrational behaviour) and theoretical model “Homo Economicus”. Behaviour research on “Money Illusion” shows this irrational behaviour. (I. Fischer (1928), J.M. Keynes (1936), R. Schiller and G. Akerlof (2010)). The economic activity of the person in the conditions under uncertainty mostly has considered as separate fundamental problem. Almost all researchers agree that the modern economic reality is the environment of fundamental uncertainty.

To explore this issue, we organized the two-parts lab experiment. In the start of experiment, we gave each participant 20000 rubles. The participants were warned that they will get the real money at the end of experiment (1/100 of the amount that they will have after making decisions).

The first part of lab experiment was organized as consistent decision-making process in condition of fundamental uncertainty. The participants had to make the complicated choice in conditions when calculation of probabilities is impossible. We developed a platform with an economy that involves twenty economic agents who interact by buying and selling ten different goods. Each good had own price. Each session has ten periods of the decision making. The subjects received full information about all previous periods, including prices, endowments of the goods and of money of all subjects, and all decisions made by themselves and other subjects in the previous rounds. The subjects made decisions about buying and selling the different goods in each of the ten periods. These decisions determined the supply and demand functions and the equilibrium prices in each period. We conducted ten experimental sessions. The second part is the special form of the forecast of the price. Each agent can use this form in each round and assume how to change the price. Each session involved from ten to twenty agents, who playing ten periods of the game and had form of the forecast. Subjects were both high school students and bachelor students. Agents were presented by small social groups (dyads and triads). In the research work, we rely on money illusion definition as the distorted perception of a universal equivalent of exchange (money) which expressed in decision-making proceeding not from real consumer ability of money, and from the nominal sum of money.

The hypotheses of our research were: a) how the economic activity of the person and the money illusion factor in the conditions of fundamental uncertainty are correlated; b) how many agents will used forecast of the price.

The effectiveness of the participant of an experiment was estimated in enhancement of the starting capital expressed in a money equivalent (20000 c.u.). For the analysis we investigated the last iteration, because the final result is calculated at the initial price (P0), after the last iteration. If participant sell goods on the last iteration at the price below initial, i.e. condition P0>Pn is satisfied or buy it above initial P0<Pn, then, the usefulness of goods expressed in money after recalculation on P0 will be lower greatest possible.

We assumed that the agent decides on the action, based on the price of the previous iteration Pn−1, since due to the lack of information (under fundamental uncertainty) he/she cannot calculate the
probability of the occurrence of the price \( P_n \). We have four conditions for sale and four conditions for purchase which define assessment for each agent for distribution of coefficient of money illusion (CMI).

For sale of weight were distributed as follows: \( P_0 > P_n \) и \( P_0 > P_{n-1} \): 2; \( P_0 > P_n \) и \( P_0 < P_{n-1} \): 1; \( P_0 < P_n \) и \( P_0 > P_{n-1} \): -1; \( P_0 < P_n \) и \( P_0 < P_{n-1} \): -2.

For purchase all weight are distributed back.

The general ball of CMI was considered by summation of scales for each agent. \( \text{CMI} = 2y(m) + y(m) - y(m) - 2y(m) \), where \( y \) – the number of the realized transactions on various commodity names (from 0 to 10), \( m \) – the index of the agent. Thus, the total score is lower, the less agent was subject to effect of illusion of money. Negative assessment shows about the most rational decision-making on the last iteration.

The experiment results show that 75% from 60 agents have an action on the last iteration and 88,89% have positive number of CMI, max value was equal 18, min value was equal -17, average value was equal 4,36.

In the experiment agents could use the special form to assume how to change the price. The analysis of forms of the forecast of the price and actions of the agent showed that only 43,33% of agents filled it. It shows irrational behavior at decision-making. Only 35% of agents made a forecast and committed an action. It is interesting to observe that an agent with a minimum CMI made a price forecast for each iteration with a small deviation. But the agent with the maximum CMI never did the forecast of the price. Coefficient of correlation for CMI and the forecast of the prices of \( r = -0.27 \). This research requires more careful consideration and an increase in the sample for analysis.

“The price of social impact: tradeoff between social and business value”

Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Gal Gutman (Ben Gurion University) with Oded Lowengart.

Abstract:

Businesses strive to adapt themselves to customers’ needs, desires, and demands; however, there is some uncertainty regarding the social value consumers expect business to deliver. This research is designed to shed light on customers’ perceptions toward the social value provided by businesses by exploration of the trade-off between economic and social values: namely, how customers perceive different kinds of social values provided by businesses and how they apply different considerations to determine what price they are willing to pay for social value.

Theoretical background and research question—The question regarding social value provided by businesses is not a new one, and its answer has changed over the years (Dart, 2004). In the 1970s, it was customary to perceive the social value as external to the business organization, and argue that the only responsibility a business had was to maximize its profits for shareholders (Friedman, 1970). In the 1980s, we witnessed initial integration of social value in business organizations, driven by the stakeholder theory (Freeman, 1984) and the movement for corporate social responsibility (CSR; Carroll, 1991) that claims that for an organization to perform well, it has to consider all its stakeholders including employees, customers, and suppliers. At the beginning of the 21st century,
social value has become incorporated into the core of business organizations, with the creation of social enterprises (SEs)—organizational forms that aim to achieve social goals by applying business strategies. These are hybrid organizations that strive for radical integration between business and social objectives, and equally incorporate both into the organizational core (Yunus, 2009). The main difference between social enterprises and organizations that apply CSR lies in the importance of social value for the organization. While CSR initiatives generate social value in addition to business value, for social enterprises, the social value and business value are equally important.

These changes raise the following questions regarding the social value as it is being reflected in customers’ perspectives: Can customers distinguish between the different social values? Can they differ between the value provided by organizations with a CSR policy and SEs that incorporate social value into their core business, and how these perceived value differences may affect their willingness to pay for the organization’s product or service?

Method—To learn about the importance customers attribute to social and business considerations and the trade-offs between them, we employed an experiment design and utilized a CBC (choice-based conjoint) analysis. The experiment simulated choice between three types of cafés, each offering a different social value: (1) no social value, (2) a CSR—an organization that donates to a social cause, or (3) an SE—the social cause is part of the organization’s mission, and integrated into the business’ core values. In addition to the social orientation, another attribute was presented in each simulation—either price (one of four levels) or service quality (one of four levels, we used waiting time as a proxy). In each simulation, participants were asked to relate to two products—a cup of coffee or a full breakfast. These two products represented two price levels that usually require different waiting times. Participants (n=68, Mage=27) were exposed to 28 simulations in total, in addition to answering several demographic questions.

Findings—Our analysis shows that customers associated higher price with lower perceived utility. In addition, it appears that the perceived utility of the cafés that integrated social value was higher than the perceived utility of the café that operated purely as a business organization. Interestingly, respondents distinguished between the two cafés that provided social value, preferring the SE café over the CSR one. Customers not only perceived the utility of the social cafés as higher, but were willing to pay more for the coffee provided by the SE.

Cluster analysis suggests that customers were more sensitive to changes in service quality than to those in product prices. It appears, they were more sensitive to changes in price when the more expensive product was involved. Furthermore, customers were more sensitive to changes in waiting time and product price when the more expensive product was involved. In the breakfast simulation, an additional cluster was added, dividing the sample into three groups: participants who based their choice on the café’s social orientation over the price, those who slightly preferred price over the social orientation, and those who strongly preferred price over the social orientation. When service quality was involved, we witnessed the same pattern. The sample was divided into three groups: participants who preferred the social orientation over the waiting time, those who slightly preferred waiting time over social orientation, and those who strongly preferred waiting time over social orientation.

Our findings suggest that customers typically preferred the businesses that provided social value alongside the business value, distinguishing between different social values that were provided, and
were even willing to pay a premium to ensure that social value was incorporated into an organization’s core business. However, social value has its own limits in customers’ perceptions and choice; whereas customers were willing to pay more, they were not willing to compromise on service quality, and were more sensitive to changes in waiting time and product price when the more expensive product was involved. This research offers a trade-off mechanism through which the SE may be further investigated and concludes with managerial implications.

“Examining values as behavioural drivers in personal financial decision-making”

*Tuesday 12:30 (HOGAN MEZZANINE FOYER).*

**Jeff Healy (Athabasca University).**

Abstract:
Keeping up with the Joneses. Robbing Peter to pay Paul. Pouring money down the drain. These idioms have two things in common: they describe how money is spent, and they judge how money is spent. In this paper I suggest that values determine our views of how others spend money but are also a driving factor in personal financial decision-making and can be linked to personal financial success.

There is ample literature examining personal financial knowledge (e.g. Bell & Lerman, 2005; Hancock, Jorgensen, & Swanson, 2013; Perry & Morris, 2005) and factors that affect behaviour (e.g. Hess, 2012; Verplanken & Sato, 2011), but there is little that links specific values to outcomes (Gogolin, Dowling, & Cummins, 2017). Calls for more financial education assume that improved financial knowledge leads to better decision-making and personal financial success (Vitt, 2004), but the evidence for this is tenuous (e.g. Kaiser & Menkhoff, 2017; Miller, Reichelstein, Salas, & Zia, 2015; N. Tang, Baker, & Peter, 2015). Two individuals with similar knowledge will often make drastically different decisions (e.g. Pepper, Jackson, & Uzzell, 2009).

Behavioural economics helps to describe and predict actual economic behaviour rather than prescribe it as in most normative consumer theory models (Thaler, 1985), but they often do not answer why. Individuals frame outcomes and decisions to maximize happiness rather than simply economic utility (Kahneman & Tversky, 1979, 1984; Shefrin & Thaler, 1988; Thaler, 1985), therefore decisions are or can appear irrational (Graham, 2017; Vitt, 2004). These decisions can sometimes be explained by a lack of self-control or other factors, including beliefs (Kidd, Palmeri, & Aslin, 2013). Situational or specific beliefs and attitudes are linked to underlying values (Ajzen, 1991; Shih & Ke, 2014; Steg, Willem Bolderdijk, Keizer, & Perlaviciute, 2014; Verplanken & Holland, 2002), and values and the priorities we place on them affect both our actions and perception of reality (Ajzen & Fishbein, 1972; Braithwaite & Law, 1985; Gutman, 1982; Kidd et al., 2013; Rohan, 2000; Schwartz, 1992, 1994, 2012; Schwartz & Bilsky, 1990; Vinson, Scott, & Lamont, 1977). This paper uses the Theory of Planned Behaviour to explain the link between values and their manifestations in behaviour (Ajzen, 1991).

To link values to outcomes, values must be defined and measured. Gutman’s (1982) means-end chain model has been used to explain consumer behaviour, but is not useful for measurement at the individual level. The same can be said of Hofstede’s cultural dimensions (Jones, 2007). While Rokeach’s Value Survey is a benchmark, it has been updated and improved a number of times (e.g.
Beatty, Kahle, Homer, & Misra, 1985; Braithwaite & Law, 1985; Vinson et al., 1977). As a measure of values and value priorities that can be linked to behaviour, the Schwartz Value Survey provides an empirically-tested method that can be used at the individual level (Schwartz, 2012). With some modifications to account for the moderating effects of identity (Akerlof & Kranton, 2000; Li, Lim, Tsai, & O, 2015; Shoemaker & Bolt, 2018; Whitmarsh & O’Neill, 2010), its results can be correlated to financial outcomes.

To examine the relationship between values and personal financial success, success must be defined and measured. Traditional normative economic models incorrectly posit consumption levels as a major determinant of well-being (Headey, 1993). The pursuit of maximal utility in these models also includes the implicit goal of minimizing inputs and suggests that leisure is pleasure and work is pain (Headey, 1993), but we know that people act to increase happiness and not to maximize economic utility (Kahneman & Tversky, 1979; Pepper et al., 2009; Thaler, 1985; Vitt, 2004).

Extrapolating from this and numerous studies, it is clear that perceived financial well-being (which is linked to overall well-being) is subjective (Fletcher & Lorenz, 1985; Hira & Mugenda, 1999; Keese, 2012; Szendrey & Fiala, 2018; Xiao, 2013).

While financial well-being has an established subjective component, it is clear that measurable objective components are also important. Financial wellness then, rather than well-being, can be defined as a function of subjective perception and personal satisfaction, objectively measurable financial status, and observable behaviour (Joo, 2008). The three major money attitude scales (the Money Attitude Scale, Yamauchi & Templer, 1982; the Money Beliefs and Behaviour Scale, Furnham, 1984; and the Money Ethic Behaviour Scale T. Tang, 1992) were excluded as measures of personal values due to their focus on attitudes and behaviours rather than underlying values, but each has valuable input for measuring financial behaviour. For financial satisfaction, there are numerous possible measures, but existing overall well-being measures such as the Satisfaction with Life Scale (Diener, Emmons, Sem, & Griffin, 1985) could be modified to limit them to personal finances.

For objective output measures, there are ample financial ratios and benchmarks to measure financial outcomes, and to define a financially healthy individual or household (Greninger, Hampton, Kitt, Achacoso, & Kitt, 1996). Other models measure and catalog financial behaviours that cover various facets of personal finance, including cash management, investing, debt, etc. (Hilgert, Hogarth, & Beverly, 2003; Xiao & Dew, 2011).

Using financial wellness as an estimate of personal financial success, any measurement tool must therefore include: 1) objective economic measures (e.g. income, debt) which can be compared as absolute values and as ratios to compare against other individual responses, 2) behaviours which can be binary (yes/no) or measured on a scale (never, sometimes, always, etc.) and cover all aspects of personal finance (e.g. cash flow, investments, debts, etc.), 3) subjective measures of personal financial satisfaction and well-being, and 4) money attitudes which may be linked to financial behaviours and underlying values.

What values drive successful decision-making and behaviour in personal finance? As a first step in answering this question, this paper defines values and financial success, and explores frameworks to measure each. I identify a clear gap in the literature with respect to values and financial outcomes, and suggest that outcomes cannot be improved with knowledge alone. Behaviour is affected by numerous factors, and values play an important role. For organizations and educators whose goal is
to help people succeed financially, much more is needed than simple classes or more educational materials. An understanding of behavioural economics or psychological factors can help formulate generic rules or procedures, but without understanding values, educational endeavours will continue to provide disappointing results. This paper demonstrates that by attempting to discover what specific values drive decision-making and related outcomes, organizations will be better suited to improving and tailoring education efforts, and can even encourage those values that lead to better outcomes for all involved, and suggests a research agenda for those willing to develop this knowledge.

“Social norms in the process of incurring and repaying financial liabilities”

Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Anna Hełka (University of Social Sciences and Humanities, Katowice Faculty of Psychology) with Małgorzata Wójcik.

Abstract:
Aim of the study
The influence of social norms on the propensity for incurring and repaying liabilities has not been examined yet. However, Gathergood’s research (2012) indicates the significantly lower psychological costs of incurring debts by individuals living in high bankruptcy regions, which gives the reason to believe that the available social norms may be important not only in the context of the psychological costs of incurring debts, but also in the sheer propensity to incur and repay financial liabilities. The main aim of this study was to determine which social norms are important to Poles with regards to the debt-incurring process. We decided to conduct individual in depth interviews (IDI) which allowed not only to define list of above-mentioned norms but also to determine the connotations words such as credit and debt in the Polish society which has not been so far thoroughly researched in Poland. We were eager to examine whether people with various experience with debts share the same or different social norms concerning debt-incurring process. Activated social norms may influence different behaviours including economic one (Fehr & Fischbacher, 2004), therefore we expected that [H1]: “People with various experience in incurring and repaying financial liabilities will declare different social norms concerning debt-incurring process”.

Procedure
In order to verify our hypothesis we conducted 21 semi-structured IDI with 11 women and 10 men (age 23 to 73, mean age = 39,857 , σ= 6,293) who have various experience in incurring and repaying financial liabilities: have never taken any loan (non-borrowers), repaying in a timely manner (model borrowers) and having trouble repaying their liabilities (unreliable debtors).

In the initial part of the interview subjects were familiarized with the definition of social norms (what is typical as well as what is socially acceptable). Then respondents specified which social norms concerning incurring and repaying financial liabilities are valid in Polish society, they also assessed whether these norms are universal or apply only in certain groups. Further, the respondents declared by which social norms they themselves are guided in terms of incurring and repaying financial liabilities. The study ended with questions about demographic data and previous experience in the borrowing and repayment of financial obligations of the respondent. The structure
of the interview was designed in order to find out which social norms are available and what are acknowledged by Polish respondents. The interviews took place between December 2015 and March 2016. Data in the form of interview transcripts was analysed in Nvivo 10, using the techniques of the thematic analysis procedure (Braun, Clarke, 2006) within a constructionist framework (Burr, 2003). RESULTS

The thematic analysis resulted in 31 codes. They were grouped into 2 key themes: Social norms concerning (1) incurring and repaying financial liabilities (16 codes); (2) the deviations of repaying financial liabilities (14 codes).

Almost all respondents considered that financial liabilities such as credit or rent shall be pay on time and with the high priority. Nearly half of the respondents (mostly unreliable debtors) declared or regarded that other Poles use credit only in case of necessity or as last resort. It is worth noticing that only one model borrower and three non-borrowers mentioned this category. Majority of the respondents admitted that people should not live beyond its means which refers to both loans and other financial liabilities and expenses. 1/3 of them referred this norm to themselves in particular. This norm was mentioned by all model borrowers and unreliable debtors but rarely non-borrowers. About half of respondents (mostly unreliable debtors) regarded that credit use is widespread and is a means to finance large purchases such as a car, house or household appliances. Half of unreliable debtors (and only them) treated credit as a quick way to solve financial problems.

Three categories refer to negative sides of credit use namely: “credit as a source of stress and discomfort”, “credit as something which is expensive and available only for richer parts of society” and “if you take credit remember that something may go wrong” (eg. losing a job, sickness, economic meltdown). It shall be emphasized that these three categories were almost absent in model borrowers answers and were present in interviews with most of unreliable debtors. Majority of non-borrowers and unreliable debtors and only one model borrower mentioned that although it is not accepted some people deliberately commit frauds. It seems that model borrowers have significantly different approach to the loans that others. More particular, they seem to not notice the negative aspects and risks associated with taking out loans.

The most frequent category among key theme “social norms concerning the deviations of repaying financial liabilities” was “the consequences of not paying” which was recalled by majority of unreliable debtors and non-borrowers but only one model borrower. About half of the respondents (but among them only two model borrowers) recognized that crisis situations such as financial crisis, poverty, job loss, health hazard and other misfortunes could give an excuse for non-payment of financial liabilities. 1/3 of respondents (but again only two model borrowers among them) mentioned that people may have problems with the timely payment of debt as a result of their carelessness, lack of reflection or helplessness of life which may lead to incur further loans in the shadow bank and fall into a spiral of debt. Again, model borrowers present different approach – they indicate much less excuses for non-payment than others.

Half of respondents indicated intergenerational differences in the approach to repayment financial liabilities. A large group also pointed to significant differences in borrowing and repaying loans from banks and from family. Several contributions pointed to other explanations of non-payment liabilities, such as: dissatisfaction with the services for which we pay, obligation’s amount (you may not pay out small one), gambling or other addictions and debt which you have not incurred yourself.
Conclusion
Reported study helped to identify a list of social norms important in the process of borrowing for the Poles and revealed a number of differences between people with different experience in indebtedness.

“Friends as tools: The relationship between dispositional greed and friendships”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Karlijn Hoyer (Tilburg University) with Seger Breugelmans, Marcel Zeelenberg.

Abstract:
Greed is an important economic motive that appears to be related to a variety of economic decisions (Lea, Tarpy & Webley, 1998). In the context of work, for example, greed is related to working in high-wage professions and fields such as oil-industry, sales and banking, but less to professions in education, social work, and healthcare (Van Muijen & Melse, 2015). Greedy employees are more likely to work harder and over-earning more, than their less greedy counterparts (Zeelenberg, Seuntjens, Van de Ven, & Breugelmans, 2019). Furthermore, greed also predicts self-interested behaviour in economic games (e.g., ultimatum and dictator games, and resource dilemmas; Seuntjens, Zeelenberg, van de Ven, & Breugelmans, 2015).

Greed, the insatiable desire to acquire more, is not only be experienced for material possessions, but also for non-material desires, such as food, sex, status and social relations (Seuntjens, Zeelenberg, Breugelmans, & Van de Ven, 2015), making greed a broader concept than materialism (i.e., the desire for material goods). Existing research on greed, however, has focused mostly on economic behaviour and consumer decisions. So far, little is known about greed in social relationships (beyond the realm of the digital world), whilst social relationships are an important part of people’s daily lives.

The process of acquiring material goods versus ‘acquiring’ a friend is a different for two reasons. Firstly, a purchase decision is often unilateral (as products do not choose their buyers), whereas friendships (even more than digital friendships) require a mutual selection (Newman, Yuki, Yamada, Nezlek, & Schug, 2017), meaning that the target friend needs to reciprocate your liking (Curtis & Miller, 1986). Thus, friendships involve interdependence. Secondly, contrary to the in the moment decision to acquire a material good, the decision to become and stay friends is a lengthier process and often requires spending time together and sharing experiences, meaning that both parties can change their mind about being friends at any moment.

Greedy individuals do not seem to be the nicest people to be and stay friend with. In general, people do not aspire to be labelled greedy (e.g., Gilliland & Anderson, 2011), as it has a very negative connotation. Many religions and lay-people, for example, see greed as a vice that causes egoistic behaviour, harm to others and social strife (see, Oka & Kuijt, 2014; Sutherland, 2014). Greed is even linked to immorality and unethical behaviour (Seuntjens, Zeelenberg, van de Ven, & Breugelmans, 2019). Furthermore, greedy individuals score low on agreeableness (Big 5; Krekels & Pandelae, 2015; Mussel & Hewig, 2016) and high on meanness (Triarchic Model of Psychopathy Questionnaire; Mussel & Hewig, 2016), indicating, among other things, deficient empathy, lack of close attachments with others and egocentrism.
Combining the above, dispositional greed is likely to have an effect on existing friendships and social contacts, and the amount and the ‘kind’ of friends and social contacts desired. On the one hand, greedy individuals might experience an increased desire to have as many friends and contacts as possible, especially functional friends that can help fulfil their needs (including their economics goals) without requiring too much in return. On the other hand, their greedy behaviour might result in shorter and less close friendships and contacts, and a decreased feeling of interpersonal attachment. The target friend might, for example, conclude that the friendship is too unbalanced (i.e., their own needs are not fulfilled), or the friendship might become too costly for the greedy individual to maintain. As a result, friends might drift apart early or friendships might not develop beyond the stage of casual friendships. Overall, a greedy individual might experience a decreased satisfaction with one’s social environment compared to less greedy individuals, and as a consequence might experience more feelings of loneliness. This study aims to investigate how dispositional greed is related to quantity and quality of friendships and social contacts.

In a first study, we examined existing data from the LISS panel (www.lisdata.nl; Dispositional Greed Scale 2013, Personality wave 6, and Social Integration and Leisure wave 6). We found that greed is negatively correlated with inclusion of others in self (r(3686) = -.17 and p < .001), meaning that greedy individuals feels less close to others than their non-greedy counterparts. When asked to indicate and comment on a maximum of 5 of their closest contacts, greed is positively correlated to the amount of contacts mentioned (r(3746) = .03 and p = .033) and how often they talk to these people (r(3734) = -.12 and p < .001). Greed is negatively correlated with relationship length (r(3693) = -.19 and p < .001) with these same closest contacts. In general, the greedy are less satisfied with their social contacts (r(3686) = -.17 and p < .001) and they experience more feeling of loneliness (r(4943) = .14 and p < .001).

In a follow-up study, we focus our attention more towards the relationship between greed and the quality and quantity of close and casual friends. Replicating the result of a pre-study (r(176) = .39 and p < .001), initial results indicate that greed is positively correlated with the objectification of friendships (r(64) = .45 and p < .001), meaning that they treat friends, like objects, are treated as means to an end. Together, these findings are important for understanding the economics and psychology of friendship, and provide insight into the role of greed in the quantity and quality of friendships.

“A relative-rank model of context effects in the long term”

Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Yu-Chun Huang (University of Warwick) with Gordon D.A. Brown, Lukasz Walasek.

Abstract:
Standard choice theories typically imply that context effects are eroded by consumers’ exploration of all market alternatives to acquire their true, context-independent preferences. However, some behavioural evidence invalidates this implication. Presenting an example of the compromise effect, this paper elucidates a potential psychological mechanism that underlies consumer behaviour with complete learning to explain why learning through the market context may result in suboptimal choices in an equilibrium in the long run, and why this anomaly does not eventually push the context to infinity. A behavioural model that builds upon relative rank theory is proposed; it suggests that
consumers learn rank-based expressed preferences on the basis of binary ordinal comparisons between experienced alternatives, due to the limited conscious accessibility of stable underlying preferences and insensitivity of the absolute magnitude of product attributes. Yet, unlike relative rank theory, the model believes that consumers may experience some preference uncertainty during learning and thus rationally adopt the matching strategy in addition to pure guidance by obscure internal feelings. Selecting the matching strategy will induce consumers to choose an alternative by aligning its rank in the product line with their respective rank in the population’s taste distribution. Thus, a misperception of one’s relative position may incur systematic errors to learning outcomes. With incorporation of the false consensus effect, denoting the tendency to perceive oneself to be common and average, computer simulations are performed to show that the compromise effect will naturally arise when consumers exhibit the false consensus effect, and disappear when the context becomes extreme so that the difference in underlying preferences is large enough to override the false consensus effect. This paper also highlights an important issue in consumer welfare wherein a monopolist can exploit consumers continually by distorting the menu.

“Influence of distance of beneficiaries on reactions to social advertising depending on consumer’s personal values”

*Tuesday 12:30 (HOGAN MEZZANINE FOYER).*

*Dominika Maison (University of Warsaw) with Aleksandra Furman.*

Abstract:

1. Introduction

In the last 20 years we have seen a large growth of a third sector in Poland, with increasing number of charities aimed at helping all kinds of beneficiaries. The focus of the present research is to understand how effectively acquire consumers’ help in case of more difficult, distant beneficiaries.

We hypothesize that the reactions to a social advertising message will be less positive the greater the beneficiary distance, due to decreased tangibility and perceived verifiability of help connected with increased physical distance (Grau, Folse, 2007). Another factor that can lower motivation to help is a categorisation mechanism based on the perception of beneficiaries as “in-group” or “out-group” members (Tajfel et al., 1971). From this perspective out-group members are more “difficult” to help than in-group members. In Piliavin’s study (1969), people more readily helped single mothers from the same city as the respondent than from a different city or state.

We also assume that there are some internal factors that might reduce influence of beneficiary distance, such as value structure. Referring to Schwartz (1994, 2017) value theory, we consider values to be important goals, influencing choices and behaviours. There are two main dimensions that might be considered: Social Focus (Universalism, Benevolence, Conformity, Security and Tradition) and Personal Focus (Power, Achievement, Self-Direction, Stimulation and Hedonism). Values that build each of these two dimensions are often contrary and impossible to be implemented at once in a single behaviour. There is evidence that Social Focus values are positively related to prosocial behaviour, while Personal Focus relate negatively (Daniel, Bilgin, Brezina, Strohmeier, & Vainre, 2015; Sosik, Jung, & Dinger, 2009). Basing on that, we expect that people with high Social Focus values will react more positively to social advertising message, while those with high Personal Focus will present weaker response. Another assumption is that when a Social Focus is
People are more motivated to help others. Prosocial behaviour helps them act coherently with their value system and that might make them less susceptible to contextual factors such as beneficiary distance. Basing on this assumption, we hypothesize that Social Focus values will moderate the influence of distance of beneficiary on reactions to charity advertisement. Consumers with high Social Focus will react similarly to an ad, independent of the beneficiary distance. As Personal Focus is mostly opposing dimension, we also expect reversed moderation: people with high Personal Focus will be more sensitive to the beneficiary distance and will react less positively when beneficiary will be more distant.

2. Method
An experimental study with 2 conditions (beneficiary: low and high distance) has been conducted. Participants were presented with a fictitious social advertisement of non-existent charity “Crumble of Heart” which encouraged them to donate to support the fight against malnutrition of children. Distance of beneficiary was manipulated by the nationality of the children: Polish (low distance) or Indian (high distance).

The study was conducted on an internet research panel. In wave 1 (experimental part), N = 221 respondents participated; in wave 2 (values measure) – N = 158.

Dependent variables were evaluation of the ad, intention to help and factual help. Evaluation of the ad was measured using four 7-point semantic differential items. Intention to help was measured using three-item 7-point Likert-type scale. Factual help was measured by informing participants that the research panel supported the charity “Crumble of Heart” and that they could donate some of the points gained as a remuneration for participation in the study. Respondents were asked whether they would like to do so and, if the answer was positive, how many points they donate. Personal values were measured using Schwartz’s PVQ-RR scale.

3. Results
The results of linear regression analyses showed that consumers evaluated the advertisement more highly and showed greater intention to help as well as greater factual help when it concerned beneficiaries of low distance (Polish children). Both Social and Personal Focus values predicted ad evaluation and intention to help. The higher both Social and Personal Focus were, the better was ad evaluation as well as intention to help. However, when it came to factual help, Social Focus influence remained positive, while Personal Focus showed no significant main effect. Personal Focus was a moderator of the relationship between distance of the beneficiary and factual help. People with low Personal Focus donated similar number of points for both low and high distant beneficiaries, while consumers with high Personal Focus donated less points to beneficiaries of high distance (see Figure 1).

4. Discussion
The findings from our research confirmed the hypothesis that beneficiary distance influences negatively both declared and factual support of the charity.

Social Focus related positively to all dependent variables, as predicted. However, Personal Focus showed unexpected pattern of results: it did not show negative relations, contrary – it even enhanced declared, but not factual help. It is possible that prizing social status might favour self-presentation as helping and prosocial person, but it does not impact actual decisions.
Personal Focus showed also expected interaction effect with beneficiary distance: high Personal Focus was related to limited willingness to help more distant beneficiaries, while people with low Personal Focus values helped independently of beneficiary distance. Thus consumers with low Personal Focus (and usually, as dimensions are contrary, higher Social Focus) are less susceptible to contextual factors and more willing to help more distant beneficiaries.

The findings bring some important implications for further research and for specialists conducting charitable campaigns. For scholars, they show that a certain structure of personal values may make a person help when others find not helping easily explainable, which is an interesting avenue for further inquiries. For practitioners, our results show that there are some individual traits, like personal value structure, which make individuals exceptionally susceptible to social advertising.

“Psychological ownership and acceptability of water system management policies”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Vanja Medugorac (University College Dublin) with Teresa Hooks, Geertje Schuitema.

Abstract:
The goal of this study was to explore if three groups of users of water systems in Ireland – private well owners, group water scheme members, and users of the public mains – differ in their level of psychological ownership over these systems. We also investigated if psychological ownership influenced their water conservation awareness and behaviour, as well as public acceptability of policies directed towards management of water quality and quantity (including both push and pull measures). We hypothesised that formal and psychological ownership over water systems has a role in explaining differences in behavioural and attitudinal outcome among these three groups of water system users. An online survey was conducted on a private (N=152), group (N=144), and public (N=152) owners of water distribution systems in Ireland.

Results show that private well owners did feel higher individual psychological ownership (i.e., knowledge, control, and investment) and collective psychological ownership over their water systems than the remaining two groups. Also, group water scheme members showed higher individual psychological ownership (i.e. knowledge, control and investment) over their water system than public group. Results showed that individual psychological did not significantly predict water conservation awareness and behaviour, or policy acceptability among three groups of water system users. However, collective psychological was a consistent positive predictor of policy acceptability suggesting the importance of group-level beliefs. Theoretical and policy implications will be discussed.
“Financial fragility in the Nordic and Baltic regions: A comparison of the relative effects of financial knowledge, financial habits and time orientation”

Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Ellen Nyhus (University of Agder) with Panu Kalmi, Leonore Riitsalu, Olli-Pekka Ruuskanen.

Abstract:
The purpose of this study is to investigate possible antecedents of financial fragility in four Baltic and Nordic countries: Estonia, Latvia, Finland and Norway. More specifically, we test the relative effects of financial knowledge, financial habits and time orientation on financial fragility. Financial fragility increases the likelihood of financial problems (Lusardi & Tufano, 2015), which in turn will have negative effects on well-being. A few previous studies indicate that financial knowledge may be one important determinant of fragility (Lusardi & Tufano, 2015), in addition to psychological variables like time orientation (Howlett, Kees and Kemp (2008) and financial habits (Cummins, Haskell, & Jenkins, 2009). In this study, we investigate if knowledge, financial habits, and time orientation predict financial fragility across four countries. The goal is to find out if the relationships found in previous studies can be replicated in these countries, and if the relative effect of knowledge, habits and time orientation changes between countries.

Data
We use data collected as part of OECDs international mapping of financial literacy in 2015 (OECD, 2016). In all four countries, the OECD questionnaire (OECD 2015) was translated into the national language(s) and data were collected from representative samples in each of the four countries:

Estonia: 1,125 individuals aged 18-80 years were interviewed face-to-face. After weighting, the sample is representative of the Estonian population with respect to gender, age, region and education. The questionnaire was translated into both Estonian and Russian

Latvia: 1,019 individuals aged 18-79 years were interviewed face-to-face. After weighting, the sample is representative of the Latvian population with respect to gender, age, region and nationality. The survey was conducted in Latvian and Russian

Finland: 1,449 individuals aged 18-80 years were interviewed face-to-face. After weighting, the sample is representative of the Finnish population with respect to gender, region, age, and socioeconomic status.

Norway: 1031 individuals aged 18-80 were interviewed through a web-survey. After weighting, the sample is representative of the Norwegian population with respect to age, gender, educational level, and region.

Measurement
The OECD questionnaire and codebook can be found in OECD (2015). Here we present the variables used in the present study:

Financial fragility is measured by two variables: One is if the respondent has run short of money the past 12 months (dummy variable), the second is a self-assessment question of the respondent’s ability to cover unexpected expenses in the future (measured by the period the respondent could cover living expenses without borrowing if the household lost its main source of income).
Financial knowledge is measured by 7 questions, including questions about compound interest, inflation, diversification. The number of correct answers for each respondent was calculated and used as an index of financial knowledge.

Financial habits were measured by constructing an index based on three questions about habits: paying bills on time, keeping close watch on financial affairs, and having a household budget.

Time orientation was split into two variables. Present orientation was measured by three statements to which the respondents could express their level of agreement to using a 5-point Likert scale. Future orientation was measured by one item.

In addition, socio-economic variables were used as control variables.

Preliminary results
Factor analysis, OLS and Probit regressions were used to analyse the data. Regression models were calculated separately for each of the country and for each dependent variable.

Preliminary analysis shows that financial fragility is higher in Estonia and Latvia than in Finland or Norway. However, Finns are more likely to encounter financial problems that Estonians. Norwegians are the least likely of having run out of money and Latvians are the most likely.

In spite of large variation between the four countries included in the analysis in terms of household income, saving rates and other financial circumstances, the results show that all four countries rank relatively high in financial knowledge compared to the other countries taking part in the OECD mapping (OECD, 2016). Among the four countries, Norway has the highest score, followed by Estonia, Finland and Latvia.

Financial knowledge, habits and time orientation are associated with aspects of financial fragility in some of the countries included in the analyses, but none of them significantly predicts financial fragility in all four countries. The only factor significantly explaining both aspects of financial fragility in all four countries is low income. Setting long-term financial goals and striving to achieve them is significantly lowering the likelihood of being unable to cover costs in case of loss of income in all four countries but is not related to having run short of money in the last 12 months’ time. Present orientated individuals are more likely to have run short of money in all four countries. In Estonia, Latvia and Norway, sound financial habits decrease the likelihood of having run out of money within the past year while this variable is insignificant in Finland.

The inconclusive results regarding the psychological factors’ associations with financial fragility call for future studies including more data on the psychological profiles of the respondents. Implications of the study will be discussed.

“Are economists sexists and if so why?”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Dimitra Papadovasilaki (Lake Forest College) with Amanda J Felkey.

Abstract:
There is a distinct gender gap in high level jobs in economics and finance, with the problem starting early on, since the students graduating with a degree in these fields are vastly dominated by males.
As of 2016 only 34% of the economics’ degrees in the U.S. were awarded to women with the rate showing no signs of improvement over the last 20 years. Insidious gender bias among students who select to major in economics and finance can partially explain this lack of diversity, and to the best of our knowledge it is something that has not been studied yet. We aim to fill this gap by testing whether students studying economics and finance are already different from students majoring in more “female” regarded fields when it comes to gender biases, and if these biases change during college life. Insidious gender bias, exhibited by both sexes, starts at an early age, and we should strive to identify and implement policies at the elementary and secondary levels of education that are designed to reduce, if not eliminate, gender biases that potentially impair students’ career choices, and therefore create market inefficiencies. By measuring gender biases among persons choosing economics and finance we can impose interventions that might mitigate the pervasive inequality of these fields. For instance, if more gender biased individuals are self-selecting into economics and finance majors, we should adjust our introductory courses to make them more inclusive and simultaneously work at the pre-college education levels to increase inclusiveness.

Our goal is to examine the following research questions:

1. Are students who major in economics and finance more prone to insidious bias compared to students in other majors?
2. Are women who choose to major in economics and finance more likely to consider themselves as more masculine relative to women that select more female regarded majors?
3. Which factors can partially explain the establishment of gender biases prior to selecting majors?

Four instruments were employed: (1) a two phase laboratory experiment, (2) a masculinity and femininity scale (Kachel, et al., 2016), (3) a set of demographic questions, (4) a set of survey questions aiming to understand how subjects’ gender attitudes are established.

Below there is a description of the 2 phase experimental task employed.

1. Laboratory Experiment:

Extending the Reuben, et al., (2014) study of how stereotypes impair women’s careers in science, we modify the experiment to explore whether economics and finance careers’ choices are affected in the same way.

All subjects were paid $5 for participation. Additional compensation was performance based and depended on how the subjects complete the tasks described below

Phase A

- Subjects were recruited from the pool of freshmen students from Lake Forest College and were asked to estimate the price of a good for different and randomly generated values of quantity demanded, using the equation: \( P=140-Q_D \).
- Subjects read and signed the consent form. Afterwards the subjects received a $5 compensation for participating in the experiment. Subjects that participate in phase A of the experiment were not allowed to participate in phase B of the experiment.
- These subjects were called “candidates.”. Candidates were paid based on their ability to correctly estimate as many prices as possible within one minute without the use of
calculators. Subjects performed the task three times, one of which was an uncompensated practice. One of the two times was randomly selected for compensation. The maximum payoff was $10. Below are the payoffs for different calculations:

A. Less than 4 calculations = $0
B. Between 5 and 7 calculations = $0.5
C. Between 8 and 10 calculations = $1
D. Between 11 and 13 calculations = $2
E. Between 14 and 16 calculations = $3.5
F. Between 17 and 19 calculations = $5.5
G. Between 20 and 22 calculations = $8
H. More than 23 calculations = $10

- Subjects reported their GPA and birth assigned sex. The latter was randomly and regardless of the birth assigned gender assigned to first names signifying the most common male and female names in the U.S.
- Candidates were randomly paired to become “teammate candidates” and later comparatively evaluated by senior and junior Lake Forest College students, i.e., the subjects in phase B.

Phase B

- Lake Forest College senior and junior students were asked to imagine they have to work on a Microeconomics project and that they need to find a team member. They will choose their team member from a pair of candidates that we will provide them. They performed this task for 22 different pairs.
- We explained to subjects the process the “teammate candidates” performed in Phase A, giving them the opportunity to practice the same task once. They were also told that based on studies there is no difference among women versus men in performing the arithmetic task they were asked to perform.
- Names of different pairs of candidates appeared on subjects’ computer screens. Subjects were told that subjects are freshmen, and their GPA range. For example: “This is Mary. Mary is a freshman at Lake Forest College. She counted 6 correct prices. Mary’s GPA is between 2.5 to 2.75.”
- Subjects estimated how many accurate price calculations each candidate could make.
- Subjects chose a candidate and were compensated based on how good their choice was as described later.
- Subjects were updated with the candidates’ performance.
- Subjects were asked to re-evaluate the number of correct price estimates the candidates made when candidates were asked to repeat the same task.
- Subjects were asked to choose one of the candidates again.
- The maximum payoff for subjects on top of the show up compensation was $22. We will randomly select 1 pairs of candidates and pay subjects based on their decisions of that pair either in the first or second round. The payment scale is shown below.
- Also, if subjects chose the highest performing candidate within the pair, they received a fixed payment of $1.
Subjects were given a drawing software and will be asked to draw an individual that is drinking coffee and is reading the “Financial Times.”

We are currently in the process of collecting data, and are hoping to present our results during the conference.

“Trust as an individualized matching tool for bank clients and counsellors”
*Tuesday 12:30 (HOGAN MEZZANINE FOYER).*

Julia Pitters (IUBH).

Abstract:
Digitalization revolutionizes many customer-oriented areas, such as banking: Almost, every fifth store in Austria has closed during the last decade (Proissl, 2015) and online services replace the former personal contact. Looking at current major trends, we find that while there is a need for flexibility, people also strive for individualization. Online-services can no longer offer “one-size fits all”-solutions but need to attract customers with tailor-made alternatives. In this research, we focus on a Viennese fintech, offering a multi-bank search platform for bank custumers and counsellors. Clients can first select criteria such as specialization, language or availability to choose their preferred bank counsellor independent of the affiliated bank. To increase the likelihood of satisfaction, we developed a special matching tool based on trust. Trust here defined as elementary and necessary prerequisite for any societal commitment (Aksu, 2017), can offer a special benefit for the relationship between bank client and counsellor. Based on a representative survey with N=508 bank clients in Austria and further analyses of more than 60 bank counsellors we found that trust entails three deciding areas: One area is trust based on rationality. “Rationality denotes a style of behaviour that is appropriate to the achievement of given goals, within the limits imposed by given conditions and constraints”(Simon, 1972, S.161). The second is based on the opposite which is intuition or pure sympathy. Several studies have shown that finance managers often use their intuition as a relevant advisor for financial decision making (Lipshitz & Shulimovitz, 2007, S.213) and about two third of the decisions are based on this principle (Gaissmaier & Gigerenzer, 2012, S.21).
The third area is experience. The results of the representative survey show that people would prefer an experienced over an non-experienced advisor. Based on the trust definitions and existing trust inventories (e.g. Evans & Revelle, 2008), we developed a 30-second gamified picture-key word combination-test to alternatively measure the different trust concepts and hypothesized a) that the majority of customers would trust bank counsellors most if focusing on rationality. B) we assumed that trust concepts will depend on the general trust in bank counsellors. C) we measured how much people identified with their personal trust concept and whether this kind of test provides enough information for a significant matching result.

The results show that rational-based trust preferences (45%) do not significantly differ from experienced-based trust preferences (40%) while the minority (15%) bases their trust on intuition. However, we found that lower general trust in bank counsellors correlates with the preference for rational trust while higher general trust correlates with intuitively-based trust concepts. Finally, the great majority (89%) could (strongly) identify with their personal result revealed by the short trust test. These findings stimulated further analyses for creating a matching algorithm between bank clients and counsellors. The test itself will be presented and discussed how much these results
contribute to the need for an ideal customer-client relationship in specific as well as the need to individualization in general.

“Financial Well-Being and Overconfidence Bias”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Cliff Robb (University of Wisconsin-Madison) with Lydia Ashton.

Abstract:
Research on financial literacy has evolved to focus on more comprehensive concepts such as financial capability and well-being. This development acknowledges the important role of financial knowledge, while also recognizing that a multitude of factors influence financial behavior and financial satisfaction. An emerging body of research explores a more comprehensive definition of financial knowledge, accounting for the role of subjective knowledge, or what consumers think they know. The present study explores the relationship between Financial Well-being (FWB) and consumers’ potential overestimation of their financial knowledge, a.k.a. overconfidence bias, using differences between subjective and objective knowledge reported in the National Financial Well-Being Survey conducted by the Consumer Financial Protection Bureau (CFPB).

Overconfidence bias exists when individuals’ subjective belief in their own abilities or judgements are better than actual objective measures of their own abilities or judgements. Overconfidence bias can manifest in three different forms: miscalibration, resulting from an overestimation of one’s own knowledge precision; better-than-average effect, resulting from an overestimation one’s abilities with respect to others’; and illusion of control, resulting from an overestimation of one’s own ability to control events. Overconfidence can cause people to take too much risk or fail to take simple preventive measures. For example, it has been shown that brokers who believe that their investment skills are above average but do not actually show above average performance tend to trade more (Glaser and Weber, 2007). Overconfidence has not only been linked to trade aggressiveness (Deaves, Lüders, and Luo, 2008) but also to portfolio non-diversification (Odean, 1999) and suboptimal performance (Barber and Odean, 2000, 2001; Fenton-O’Creevy, Nicholson, Soane, and Willman, 2003).

Whereas extensive research has been done to explore how overconfidence bias affects investor behaviour, a smaller and more recent body of literature has just started to explore the relationship between FWB and consumer overconfidence bias. For example, Robb and Woodyard (2011) explored FWB controlling for both objective and subjective financial knowledge. Results indicated that both types of knowledge were associated with financial behaviours (which ultimately impact well-being), but that subjective financial knowledge was a stronger predictor of individuals engaging in recommended financial behaviour, all else equal. Subjective financial knowledge has also been shown to be a more effective predictor of financial satisfaction (Woodyard and Robb, 2016). Further work by Robb et al. (2015) categorized consumers into four mutually exclusive groups based on their objective and subjective knowledge scores, noting significant differences in use of alternative financial services between groups. The present study will build on the work of Robb et al. (2015) by exploring associations between overconfidence bias, derived from a complex measure of subjective and objective knowledge, and FWB.
Data for this study are from the National Financial Well-Being Survey conducted by the Consumer Financial Protection Bureau. A scale measure of objective financial knowledge will be developed based on the Lusardi and Mitchell financial knowledge questions included in the survey.

Subjective financial knowledge will be based on the single-item measure, “how would you assess your overall financial knowledge?” Individuals scoring above the median on objective or subjective financial knowledge measures are designated as high knowledge, whereas those scoring at or below the median are designated as low knowledge. As a result, consumers are designated as high in both categories, high in one but not the other, or low in both categories. Each of these designations contains unique information about what consumers know objectively as well as how they personally feel about their knowledge. This results in a series of groupings or consumer categorizations; a set of consumers that are well-informed and confident about their abilities (sophisticated), a set of consumers that are poorly informed but confident about their abilities (overconfident), a set of consumers that are well informed but not confident about their abilities (underconfident), and a set of consumers that are poorly informed and not confident in their abilities (naive).

In a recent study, Zhong, Wang, Xiao, and Zhang (2017) show that households who were overconfident about their financial literacy tended to invest by themselves and were more likely to hold only stocks in their portfolios. Hence, we expect consumers that are overconfident to be less likely to seek financial advice, which can act as a complement to financial knowledge (Collins, 2012), therefore more likely to display less desirable financial behaviours. However, it is unclear whether this overconfidence also affects the consumers experience of their personal finances. For example, we hypothesize that this group of consumers may report a relatively high FWB score. Therefore, if education programs were simply targeted based on FWB measures these programs would fail to identify a particular group of consumers that could benefit from them.

One of the benefits of the proposed design is that we will also be able to explore how under confidence relates to FWB. Although the dangers of overconfidence are often talked about, under confidence is frequently overlooked. For example, we hypothesize that consumers that are underconfident may report low levels of FWB. However, it is unclear if and what type of undesirable financial behaviours they may display. Whereas they may be more likely to avoid risk, or shy away from good opportunities, they may also be more likely to seek financial advice.

Special emphasis will be given to understanding how differences between subjective and objective financial knowledge affect FWB and influence financial behaviours. An initial correlation analysis will explore if and how these categorizations interact with Financial Well-being and particularly desirable/undesirable financial behaviours. More detailed regression analyses will explore the association between the FWB measure and the knowledge groupings controlling for financial behaviours, financial education, and other demographic variables.

Results should provide researchers and educators with a better understanding of consumer financial well-being. By exploring how the differences between subjective and objective financial knowledge interact with their FWB and behaviours, education programs may be better positioned to enhance consumer well-being through more targeted messaging and nudges that could improve their financial behaviours. Some of these nudges include correcting subjective beliefs and providing timely information and/or feedback.
“How do specific learning disabilities affect time and risk preferences?”

Mosi Rosenboim (Ben Gurion University of the Negev) with Dikla Elisha, Miri Krisi.

Abstract:
This study aimed at improving our understanding of the effects of specific learning disabilities (SLD) in adulthood by comparing the time and risk preferences of 72 SLD college students and 75 non-SLD college students. Participants answered questionnaires about their time and risk preferences, made bids for two lottery tickets and took Frederick’s Cognitive Reflection Test. As opposed to our hypotheses, the subjective time discount rates of SLD college students were significantly lower and more realistic, and their scores on the Cognitive Reflection Test were significantly higher. No significant difference in risk aversion was found between the groups. We discuss the SLD students’ exertion of effort and tendency to use System 2 processes as possible mechanisms for compensating for their cognitive deficits.

“How is your government making you sad?: Measuring the direct and indirect effects of government quality on reported levels of happiness in multiple world populations”

Juhee Ryu (Korea International School).

Abstract:
Happiness is extremely important for the overall well-being of people. Many factors may directly contribute to personal happiness, including wealth, social support and a general feeling of safety. Attitude towards government has received increasing attention as potentially having indirect effects on personal happiness. When the government works well, people are happier, but they may not acknowledge the contributions that government makes towards their perceived happiness; however, when government does not work well, people may experience a reduction in happiness. To obtain an understanding of how these factors contribute to happiness, we analysed data from the World Happiness Report. A linear regression analysis was performed to analyse the effects of the following direct and indirect variables on happiness: overall wealth, social support, life expectancy, freedom to make life choices, generosity, positive affect, perceived corruption in government, confidence in government, democratic quality of government and delivery of government. We found that factors such as overall wealth (ρ = 0.28, p = 0.00), life expectancy (ρ = 0.02, p = 0.01) and the freedom to make life choices (ρ = 1.54, p = 0.00) are correlated with perceived levels of happiness. We found that government-associated factors, such as the perception of corruption (ρ = -0.91, p = 0.00) and low levels of confidence in the national government (ρ = -1.28, p = 0.00), were also correlated with perceived levels of happiness. These findings suggest that personal happiness can not only be affected by factors that directly impact the lives of individuals but can also be affected by variables with indirect impacts, including government.
“Overconfidence and Initial Public Offering decisions among the Polish managers: A behavioral corporate finance perspective”

Marcin Rzeszutek (Faculty of Psychology, University of Warsaw) with Adam Szyszka.

Abstract:
Background. Behavioral finance has become increasingly popular in recent years. Thus, some authors even claim that the behavioral school may become a new paradigm in finance and economics theory in the near future. Nevertheless, many areas in behavioral finance are still significantly understudied and require further investigation. One of these areas is behavioral corporate finance.

Objective. The aim of this study was to examine whether corporate managers, i.e. chief executive officers (CEOs) and chief financial officers (CFOs) of companies listed at the main market of the Warsaw Stock Exchange (WSE) and the alternative market New Connect (NC) also run by the WSE are susceptible to overconfidence bias (above the average effect, calibration bias, illusion of control, excessive optimism) and whether their overconfidence is related to their managerial practices in the area of decision to go public (Initial Public Offering, IPO).

Methods. In order to identify the existence of overconfidence bias and IPO managerial practices among the study participants a survey methodology was employed. The questionnaires were sent to participants via Computer Assisted Telephone Interview (CATI) and via Computer-Assisted Web Interview (CAVI), in electronic format with the aid of specially designed webpage. We managed to obtain fully filled surveys from 163 corporate managers.

Results. Polish corporate managers displayed all aforementioned elements of overconfidence bias and also revealed several irrational managerial practices connected to IPO decisions. Importantly, we observed the link between managerial overconfidence and some elements of IPO practices among our participants.

Conclusions. It seems that even well-educated corporate managers, with a high level of expertise and representing the publicly listed companies are susceptible to overconfidence bias, which may be related to their irrational managerial practices in the area of IPO decisions. Further research on behavioral corporate finance is needed to better understand psychological obstacles that face managers in their everyday decisions in company’s value creation.

“What factors affect the decision to undergo dental examinations?”

Shosh Shahrabani (The Yezreel Valley College).

Abstract:
Aim: Routine dental examinations are important for early diagnosis and treatment of dental problems among older adults in order to improve quality of life and avoid costly future treatments. International comparisons provided by the WHO indicate that Israel has a high rate of dentists per capita compared to countries with similar welfare status. Yet the figures also show that oral hygiene among older adults in Israel is poor compared to many other Western countries. In Israel 32.3% of
people aged 65-74 are toothless, compared to 27% in Denmark, 24.8% in Germany and 16.3% in France. January 2019 will mark the launching of a dental care reform for older adults in Israel. According to this reform, people aged 75 and older will be eligible for dental check-ups and basic treatments at a modest deductible fee of up to NIS 30 (about $10) per treatment.

The current study examines the factors influencing the decision of older adults in Israel to undergo routine dental examinations and treatments before the reform begins. To the best of our knowledge, there is a lacuna in the research examining this topic in Israel. The aim of the current study is to fill this void.

Methods: The research was conducted in two parts. The first part was based on 2013 SHARE (Survey of Health, Aging and Retirement in Europe) data for Israel, which included 2,332 respondents interviewed. It examines the socio-demographic, economic and health factors affecting the probability that people over the age of 50 will get dental check-ups. The second part is based on a 2017 telephone survey conducted among 608 people age 50-75 in different population groups in Israel and examines their health beliefs and attitudes toward dental treatments. The survey integrated the principles of the Health Beliefs Model (HBM) with socio-economic characteristics. Two types of regression analysis were used: ordered logistic regression to identify the influence of the demographic variables, the HBM categories and additional variables concerning the use of dental services, and logistic regression to identify the intention to get a check-up the following year.

Results: The results show that among older adults the decision to undergo dental check-ups is affected by their socio-demographic status and their health beliefs with respect to dental health. Lower age, higher income levels, and Jewish religion predicted higher chances of getting frequent check-ups. These results emphasize the unequal use of dental services among older people in Israel in that those with high economic status tend to use dental services more than those with low economic status. The results of the telephone survey suggest that fewer than fifty percent (47.2%) get dental check-ups at least once a year, while most (52.8%) undergo dental check-ups less frequently, if at all. Nevertheless, most of the participants (75.4%) indicated a major intention to undergo check-ups in the next 12 months.

The study empirically confirms the theoretical prediction of the HBM model with respect to dental check-ups among older people. The findings indicate that the chances of getting frequent check-ups increase as individuals’ perceived benefits of dental check-ups increase, as their perception of dentist availability increases and as the level of their health motivation increases. In addition, the findings indicate that the intention to get check-ups in the following year increases as individuals' perceived benefits and perceived importance of dental check-ups increase, as perceived dentist availability increases, as the level of their health motivation increases, as well as if they received a recommendation to get dental check-ups.

Conclusions: To enhance the frequency of dental check-ups among older adults in Israel, the dental reform should be extended to include people aged 50-74. In addition, planning for dental health services for the third-age population should be based upon the accepted beliefs and values of this population group. Moreover, systematic health education through media and health maintenance organizations should target this population group in order to increase the frequency of dental check-ups among the third-age population in Israel.
“Influenza vaccination in health care: The lack of free-riding, the effects of moral appeals and mandates”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Laetitia Mulder (University of Groningen) with Susanne Täuber.

Abstract:
Influenza vaccination among health care professionals can be considered a social dilemma: it is better for the collective that individual employees get themselves vaccinated in order to avoid a flu epidemic to occur. However, it is tempting to free-ride especially when vaccination uptake in a population is high. In a study among more than 500 employees working in health care, we investigated people’s inclination to free-ride on group immunity, whether exposure to moral appeals would increase vaccination intentions, and the effect of a vaccine mandate.

With regard to free-riding intentions, results showed that employees did not free-ride on group immunity. On the contrary, when the vaccine uptake was higher than employee’s own estimate of uptake needed for group immunity, they were more likely to vaccinate. This suggest that vaccination behaviour is more strongly driven by descriptive social norms than by the motivation to free-ride.

With regard to moral appeals, employees were either exposed to no moral appeal, a “do no harm” moral appeal and a “collective goal” moral appeal. An interaction was found between previous vaccination behaviour and moral appeal on vaccination intentions. This interaction showed that the moral appeals did not further increase future vaccination intentions for employees who had vaccinated themselves this season, but did increase vaccination intentions for employees who had not vaccinated themselves this season. The two types of moral appeals were equally effective.

With regard to the vaccine mandate, the results showed that employees who worked in organizations in which the flu vaccination was mandatory were more likely to vaccinate themselves than employees who worked in organizations in which the flu vaccination was not mandatory. This result was explained by a descriptive social norm: a vaccine mandate increased vaccine uptake because it increased people’s estimate of how many colleagues vaccinated themselves.

Overall, it can be concluded that, in the applied setting of the influenza vaccination in health care organizations, vaccine uptake is more strongly driven by social norms (which are increased by vaccine mandates) than by the motivation to free-ride. Also, health care employees who do not vaccinate can be encouraged to do so both by do-no-harm moral appeals and by collective goal moral appeals.

“Managing reputation in a repeated interaction: An experimental analysis”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Shahin Baghirov (Koc University) with Ayça Ebru Giritligil.

Abstract:
Incomplete information gives rise to reputation concerns in repeated interactions. We propose an experimental design to analyse a principal-agent problem in a two-period game. The principal can be regarded as a state official who will implement an agricultural policy. He does not have the appropriate information about the state of world and needs an informed agent - a private rm - to
delegate the authority to carry out the project. The policy may be consumer-oriented or producer-oriented and will be implemented on the certain regions in the first year and on the remaining in the second. The agent may be unbiased who wants the policy to match the state of world as the principal. On the other hand, the biased agent favours producer-oriented policies independent of the state of world.

The principal sets the stakes for each period (allocating regions for each year) to manipulate the reputation incentives of the agents. Theoretical model predicts that if the agent starts with sufficiently low initial reputation, principal chooses to start small and increase the stakes in the second period. It is consistent with the reputation literature on gradualism. Starting small has:

- Disciplinary effect: The agent will act according to the principal's expectation in the first period. and
- Detrimental effect: When the important decisions are reached, the biased agent will extract much benefit from the policy.

This paper has a control treatment in which we randomly set the stakes and an experimental treatment where the principal sets. We expect to observe the payoffs to be maximized when the stakes are close to the equilibrium values in both treatments. Moreover, the principal is expected to choose the equilibrium stakes. The main hypothesis is that endogenously chosen stakes provide additional incentives for the agent and we expect to observe reputation-driven action more frequently if it is endogenously chosen to start small compared to the same stakes chosen randomly. Our setup has a close resemblance to that of Andreoni et al. (2016) which experimentally analyses a twice-played prisoner’s dilemma game where the subjects set relative stakes of the interaction. Andreoni et al. observe that the subjects choose to start small and endogenizing the choice of stakes increases the cooperation. Our purpose is to attain similar results in the principal-agent setting and observe that individuals are able to maximize their payoff by managing other’s reputation concerns.

**“The impact of prior combat military service on Israeli women’s self-Efficacy and risk attitudes”**

*Tuesday 12:30 (HOGAN MEZZANINE FOYER).*

*Shosh Shahrabani (The Yezreel Valley College) with Sharon Garyn-Tal.*

Abstract:

Background: Military service in general and combat service in particular have a major impact on the behaviour of soldiers and ex-soldiers. While the literature extensively discusses the influence of military service on discharged men soldiers, very few studies refer to women combat soldiers. Over the last decade, more and women are serving in Israel Defense Forces (IDF) combat units. It is therefore important to examine how this major experience in their lives shapes their risk attitude, self-efficacy and decision-making. Hence, the objective of the study was to examine how combat service influences Israeli women risk attitude, self-efficacy and decision-making.

Methods: The study was based on 24 in-depth retrospective interviews with women who served in mixed-gender combat units in the Israel Defense Forces. The participant were recruited by snowball sampling.
Results: Two main themes related to the impact of army service emerged from these interviews: perceived self-efficacy and risk attitude in several areas of life. Our results indicate that the perceived self-efficacy among women who have served in combat units was reinforced as a result of this service, thus empowering them and causing them to feel they are able to make wiser and more calculated decisions after their discharge from the military. Some of the women mentioned that the need to overcome difficulties and the ability to command other people were what shaped or increased this sense. Moreover, half of the interviewees reported experiencing actual combat situations that were sometimes life-threatening. These experiences reinforced their trust in their own abilities to deal with complicated situations in civilian life. At the same time, some of the women noted that their perception of self-efficacy was slightly moderated over time and with the understanding that external limitations had to be taken into account.

The findings also reveal that military service contributed to an increasing tendency to take risks in extreme sports and physical activities. Most of the women noted that the perceived self-efficacy they acquired during their military service led them to think they were capable of doing everything, and that this feeling increased their risk-taking attitude in general, but that this tendency becomes moderated over time. Yet some of the women noted that after their military service they became more aware of risk-taking and risk management while making risky decisions. In addition, women reported taking calculated risks with respect to financial issues.

Yet our findings also indicate that almost half of the participants who served in mixed-gender combat units reported that a negative attitude from their male colleague was part of the difficulties they encountered. In addition, most of them reported trying to work harder than men to prove themselves in the military. Proving themselves, in turn, made them believe in their own abilities. In fact, harassment is intended to mark the boundaries of the military as masculine territory. Hence, this situation emphasizes that the struggle to establish the place of women in the military is still perceived as an ongoing problem.

Conclusions: The main conclusion emerging from this research is that the sense of self-efficacy among women in combat military service was strengthened as a result of this service, leading to their empowerment and the feeling that they are capable of making wiser and more calculated decisions after their discharge from the army. In fact, our findings suggest that the complicated and even life-threatening situations in combat units may paradoxically increase women's willingness to take risks in general, and physical risks in particular, after being discharged from the military. Nevertheless, this effect is mitigated with age since over time women take on more responsibilities, thus reducing their willingness to take risks.

On the one hand, demanding combat positions may generate threats for women resulting from their exposure to harsh experiences, which in turn may lead to post-trauma. On the other hand, these challenging combat positions offer more opportunities for women to gain important life experiences. In general, our findings indicate the benefits of this unique form of service for women since it offers new opportunities to gain administrative experience at a young age and forms the basis for making wise decisions in many spheres of life after their discharge. Understanding the implications of mixed-gender combat army service may help in designing the content of military training courses for men and women that will prepare them for the challenges of their joint service.
“Out of time? The effect of infrequent traumatic events on individuals’ time preferences, insurance take-out, and pro-social behavior”

Ori Shai (University of Haifa).

Abstract:
Violence affects civilians in different ways and at different times. In the fifteen years up to 2016, Europe endured over 2,000 terror attacks. The U.S. experienced a traumatic terror incident on September 11, 2001, and 317 mass shootings there in 1999–2013 left thousands of civilians injured or dead (Krouse and Richardson (2015)). The American wars in Vietnam, Afghanistan, and Iraq are only a few examples of armed conflicts that affected or affect civilians either directly or through the loss of loved ones.

Experiencing the loss of or injury to someone close due to war or terrorism may trigger acute trauma that, consequently, may alter individuals’ behaviour and preferences. Although war/terror incidents are unexpected and rare, the question of whether individuals overreact and change their behaviour and preferences in response to them, and to other uncommon occurrences, has attracted economists’ attention for many years (e.g. Tversky and Kahneman, 1974; Kahneman and Tversky, 1979; Sunstein, 2003).

This study explores (using Israel’s mandatory conscription law) the effect of a trauma caused by knowing someone close who died, was injured, or experienced mortal danger due to wars (20 percent of sample) or terror attacks (7 percent) (hereinafter: trauma) on individuals’ insurance take-out and pro-social behaviour. It then investigates the mechanisms that may elicit these results: change in individuals’ time preferences, beliefs, or risk aversion, or the possibility of a learning process.

The behavioural consequences of trauma are not clear. Following trauma, some individuals feel they can no longer control their lives and environment and may refrain from taking actions or decisions (e.g., accepting the burden of an insurance premium) or become impatient (giving greater weight to the present than to the longer term). Others respond by developing coping strategies (say, by increasing their family bonding), trying to gain control (by purchasing life/long-term/health insurance, for example), and/or becoming more patient.

Estimating the causal effect of trauma on behavior and preferences can be difficult for two main reasons: Researchers usually observe preferences after the fact and, since traumatic events usually affect specific populations, struggle to find a comparable control group (Chuang and Schechter (2015)). To overcome these predicaments and uncover the direction of the effect of trauma, this study employs two different identification strategies. First, it investigates the effects of trauma on behavior and preferences by using repeated cross-section datasets. Second, the analysis follows the same individuals before and after the traumatic event, includes their fixed effects, and employs a difference-in-differences methodology.

Unlike other studies that find a positive association between an insurable risk and the amount of insurance bought (e.g. Chiappori and Salanie (2000)), my results show that after exposure to the victim of an infrequent traumatic event, the insurance take-out index that I constructed increases by 7–26 percent. Moreover, the results reveal that individuals whose close acquaintance
experienced death, injury, or mortal danger due to war or terror amplify their pro-social behavior and are more likely to help others, to volunteer, and to engage in charity work.

The insurance and trauma literature provides two possible mechanisms that underlie the increase in insurance take-out after traumatic events. The first is a behavioural channel; i.e., individuals may alter their beliefs, time preferences, and risk preferences or overestimate the probability of an infrequent event (availability heuristic (Tversky and Kahneman (1973))). Second, individuals may acquire new information from experiences (Bayesian learning process (Viscusi (1991))). My findings reveal that individuals value the future more after a trauma, as manifested, for example, in their becoming more patient. By conducting several checks, I rule out other mechanisms, such as changes in available information (learning from experience), an increase in risk aversion, change in beliefs, and availability heuristics.

Since future-oriented individuals invest more in health than others do (Becker and Murphy, 1988; Ehrlich and Chuma, 1990), the rise in insurance take-out most likely stems from changes in these individuals’ time preferences (Namely, patient individuals are more likely to purchase insurance (e.g. Bradford et al. (2017))). Moreover, my results reveal that the effect is more pronounced among individuals who were more patient before the trauma than among others.

Unlike other studies in the literature (e.g. Malmanedier and Nagel (2011)), my findings do not vary in accordance with the time proximity of the event, indicating that the impact of stressful incidents on the behavior and preferences of victims’ close acquaintances is not transitory.

Since many developed countries occasionally suffer from terror or war, this research is immensely important for policymakers who need to legislate protective health-policy laws (e.g. by providing public insurance coverage), and monitor and assist individuals who buy insurance after close acquaintances experience death, injury, or mortal danger due to war/terror.

The classical models in economics simply assume that individuals alter their behaviour only in response to changes in incentives and constraints, leaving their preferences stable over time (Stigler and Becker (1977)). Therefore, determining whether these traumatic events affect individuals’ time-preferences and behaviour also makes an important and appealing contribution to economic theory.

This study contributes to the literature in several important ways. First, to the best of my knowledge, this is the first paper that uses war/terror attacks to examine individuals’ responses to having a close acquaintance who died, was injured, or was in mortal danger due to war/terror, and its implications for both health-related behaviour and time preferences. Second, in contrast to short-term experiments, my data contain real-life information on individuals’ behaviour, decisions, and preferences over a ten-year period. Since human behaviour and preferences can vary substantially between the lab and real life (Levitt and List (2007)), my findings are more applicable for policymakers than others based on outcomes of experiments might be. Last, and most importantly, the datasets and econometric strategy enabled me to track the same individuals before and after the violent actions, controlling for individual fixed characteristics—a possibility that is rather uncommon in the literature.
“The rich get richer and the poor get poorer: Investors’ behavior post biotechnology firms IPO”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Smadar Siev (Ono Academic College) with Tiran Rothman.

Abstract:
We analyse stock prices behaviour patterns post Initial Public Offering (hereafter: IPO) events within the Biotechnology industry as well as exploring the role of social media in determining these patterns. Our main results indicate positive and significant Cumulative Average Abnormal Return (hereafter: CAAR) of 3.70% after the first 20 days post IPO (until the end of quiet period) and a decline of tens percent in the subsequent 3 years. However, when dividing the sample into two sub samples using $500M market value as separator, the overall picture change dramatically - firms with market value lower than $500M yielded a positive yet not significant CAAR 20 days post IPO and an immense negative significant CAAR from day 50 and on. Firms with market value higher than 500M$ presented a positive significant CAAR from day 20 after the IPO and during the consequent year. We relate these findings to investors’ limited attention. Attention for the new IPOs arises until the end of quiet period and then diminishing to small size firms in the post IPO years. Observing social media and share returns, we see a robust correlation between the two, which may indicate that investors’ attention is also reflected in social media.

“How to deal with procrastination by better understanding of discounting”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Vineta Silkāne (Vidzeme University of Applied Sciences).

Abstract:
The aim of study is to explain the role of personality and discounting to investigate the concept of procrastination.

In accordance with the research carried out and analysis of the most popular definitions, procrastination is “the voluntary delay of an intended and necessary and/or [personally] important activity, despite expecting potential negative consequences that outweigh the positive consequences of the delay” (Klingsieck, 2013; Steel, 2007). The frequency of procrastination suggests that for chronic procrastinators it is most probably a personality trait, while in other cases situational factors plays a major role—effort required, pleasantness or aversiveness of the task, and its importance to an individual.

The most common explanations as to why procrastination emerges are time discounting, task characteristics and personality traits (Steel, 2007; Wilson & Nguyen, 2012; Wistrich, 2008). The majority of studies focus on procrastination as a personality trait, and it is often described as a self-regulation disorder. Procrastination is related to a low conscientiousness level as well as to a high neuroticism level (e.g., Steel, 2007). For self-disciplined individuals it is much easier to meet deadlines and overcome resistance to performing aversive and tough tasks, and therefore it is less likely that they would procrastinate.

Some researchers suggest that procrastination can be reduced by changing behaviour (e.g., Burka & Yuen, 2004). Usually tasks that provoke procrastination are insignificant, difficult, aversive or boring,
and often involve a risk of failure. Procrastination may also be caused by the way task deadlines are set or lack of them. In comparison procrastination behaviour related to individuals’ personality traits, procrastination behaviour caused by task conditions is easier to change.

The relationship between procrastination and discounting has been examined in several studies. Procrastination is usually examined from the time perspective (e.g., Howell et al., 2006). The longer one has to await the reward for a specific behaviour, the less attractive the perceived value of the behaviour is (e.g., Dewitte & Schouwenburg, 2002). Future benefits are discounted, or in other words, rated lower, than immediate benefits (Wistrich, 2008). Even if the result is very welcome in the future or future sanctions are severe, people still succumb to time discounting. Procrastination is less commonly explained in terms of discounting than as a personality trait.

Method
Participants. 620 respondents (44.8% male) in age from 18 to 75 years (M = 35.63, SD = 14.66) participated in the data collection.

Measurement
The participants filled-in the questionnaire consisting of: the Big Five Inventory (BFI, John & Srivastava, 1999), the Pure Procrastination Scale (Steel, 2010), the Discounting Inventory (DI, Malesza & Ostaszewski, 2017), as well as participants’ demographics such as age, gender, and education.

Procedure
Data was collected online using Google forms in June 2018. Participants were recruited through social networking sites and via e-mail. Participation in the study was anonymous and voluntary.

Data analysis
Correlation analysis and stepwise regression analysis was performed. The results were considered at the level of significance p < .001.

Results and discussion
Procrastination correlates with all variables. It agrees with the previous studies where it was established that procrastination is related to the low conscientiousness and high neuroticism (e.g., Steel, 2007). In this study, procrastination is most closely related to conscientiousness (r = -.62), delay discounting (r = .44), effort discounting (r = .50) and social discounting (r = .44).

Stepwise regression analysis for the dependent variables of procrastination was carried out. All regression models are statistically significant. The sixth step explains 49% of the variance (F(6,613) = 98.96, p < .001), and conscientiousness (β = -.46, p < .001), effort discounting (β = .20, p < .001), age (β = -.15, p < .001), delay discounting (β = .13, p < .001), agreeableness (β = .14, p < .001), and neuroticism (β = .12, p < .001) act as procrastination predictors. The results confirm the role of conscientiousness in procrastination prediction and are consistent with the results of other studies (e.g., Steel, 2007). Effort discounting is the second strongest predictor of procrastination. It means that in concrete situations, conditions related to the work that has to be done—effort required—are just as important as the personality traits—self-discipline and emotional stability. The role of effort discounting and delay discounting in explaining procrastination gives evidence of lack of long-term perspective, as the tendency is to follow an impulse and choose a solution which is less valuable in
the long-term. On the basis of these results, it can be assumed that removal of obstacles related to the respective task performance would lead to reduction of procrastination.

“Cross Cultural Validation of Behavioral Instruments in Kenya: Testing the Effect of Contextualized Instruments on Canonical Biases”

Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Anisha Singh (Busara Center for Behavioural Economics) with Nicholas Owseley, Jennifer Adhiambo, Esther Owelle, Irene Ngina.

Abstract:
Do Kibera residents subscribe to the Economist? And do they know a feminist named Linda? We design Kenyan versions of original measures used to identify three ‘canonical biases’ in behavioral science: the Representativeness Heuristic, captured by the Linda Problem (Tversky & Kahneman, 1983); the Trolley Problem moral dilemma (Cushman and Young 2011); and the Decoy Effect, popularized by Ariely (2008). Given certain cultural reference points embedded in these instruments, we propose that they may be inappropriate for measuring the underlying biases amongst a group of low-income Kenyans for whom these reference points might not be accessible. As such, we primarily test if contextualised instruments produce similar results in these measures to the originals. The preliminary results suggest that there were significant gains in participants’ understanding of some questions, and it appears that the ‘Mary Problem’ (our version of the ‘Linda Problem’) might show more bias for Kenyans than the original. Overall, however, substantive results don’t differ much compared to the originals, however, on most measures the Kenyan sample appears ‘less biased’ in standard utility maximizing terms than findings from original studies.

“Biodiversity conservation: What people know vs. what they do”

Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Jonathan Spiteri (University of Malta) with Marie Briguglio.

Abstract:
One of the key prerequisites identified in the literature when it comes to activating sustainable choices is the individual’s level of knowledge and awareness of environmental problems and their causes (Bamberg and Moser, 2007). The idea is that such knowledge helps to activate various norms like social concern, altruism, guilt and conformity, which may in turn increase individual proclivity towards pro- environmental behaviours (Bierhoff, 2002). Yet a growing number of studies have found a clear gap between environmental awareness and behaviour (e.g. O’Donoghue & Lotz-Sisitka, 2002; Courtenay- Hall & Rogers, 2002), which suggests that the relationship between the two may not be as clear as expected. In fact, Kollmus & Agyeman (2002) postulate that knowledge is only one component of an individual’s much wider ‘pro-environmental consciousness’ that includes personality traits, values, emotions, cultural factors as well as a plethora of internal and external determinants that can explain behavioural outcomes.

In this paper, we seek to analyse the existence of this gap in the domain of biodiversity conservation. We use a novel dataset drawn from a nationally-representative survey conducted among
households in a European Union member state (Malta) which contains detailed questions related to various aspects of biodiversity awareness, concern and knowledge from ecosystem services to the protected status of different species, to the practical issue of permits required for various activities that may impact biodiversity. We further consider the relationship of these variables to various pro-environmental behaviours in the biodiversity sphere (and beyond), including financial donations to environmental groups, uprooting of trees and reporting the sighting of particular species. Together with demographics and socio-economic status of respondents, we also seek to control for the various aspects of ‘pro-environmental consciousness’ identified by Kollmus & Agyeman (2002), including general attitudes towards the environment, perceptions regarding regulatory efficacy and beliefs on the attribution of blame for environmental problems. The results from this paper shall contribute towards the debate on effective communication strategies in relation to environmental information campaigns (Owens, 2000; Cialdini, 2003), since apart from underlining the importance (or otherwise) of information and education, the depth of the survey enables us to tease out which aspects of knowledge and awareness should be the focus of such campaigns in order to induce effective behavioural changes.

“The influence of autonomy on job satisfaction in Japan: Focusing on self-determination theory”
Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Midori Waki (Graduate School of Information and Communication).

Abstract:
This paper focused on Self-determination theory and examined the effects of autonomy on the Job satisfaction of Japanese.

Self-determination theory (Deci et al.) consists of five theories: cognitive evaluation theory, basic psychological needs theory, organismic integration theory, goal contents theory, and causality orientations theory. In behavioral economics, research has been actively conducted on cognitive evaluation theory that extrinsic incentives such as rewards and threaten have a negative impact on intrinsic motivation. However, other theories of self-determination have not been well studied in behavioral economic. In basic psychological needs theory, human beings are able to realize themselves and become mentally healthy and happy by satisfying the three needs for relatedness, competence, autonomy.

There is an idea of the utility of procedures that means that people value not only the results but also the conditions and processes that lead to the results. for process utility, Autonomy is considered important (Frey et al.). Labor has two advantages. One is the benefits of making money and the other is the benefits of non-monetary processes that assess the circumstances and processes that lead to results. This paper deal with the autonomy of process utility as same as the autonomy of basic psychological needs theory.

Benz & Frey had shown that self-employed persons are more satisfied with their work than employees from analysis of panel surveys in the United Kingdom, Germany and Switzerland. Benz & Frey concluded that the reasons for high job satisfaction, self-employed workers enjoy more interesting jobs and greater autonomy from survey data from 23 countries. the result applies to the countries of Western Europe, North America and Eastern Europe. However, in the case of Japan, as a
factor for high job satisfaction of the rate having an interesting job is high 77%, the rate autonomy is only 8.6%. If interesting work is not accounted for in instances, the contribution of autonomy remains low.

In this paper, we confirm in detail how much autonomy affects job satisfaction in Japan

It shows self-employed persons are more satisfied with their work than employees from analysis of panel surveys 1,433 panel data for the eight years from 2007 to 2014 from Japanese Life Course Panel Surveys for the Middle-aged (JLPS-M), However, the dataset had few question about self-determinism theory, so we did a crowdsourcing survey. (July 2018 n = 2000) We used three factors and six items of intrinsic motive, autonomic feeling and ability feeling in the scale (Yamashita) which examined self-determination theory in the industrial field of Japan. In factor analysis, the intrinsic motivation was independent, but the sense of autonomy and the sense of ability were two-factor structures that were synthesized. In the multiple regression analysis with the factor obtained as the independent variable and the degree of job satisfaction as the dependent variable, the worker (n = 1142) is considered to enjoy work more enjoyable than socioeconomic factors such as annual income and working hours. Although motivational motivation had a major effect (β = 0.36 p <.05), the sense of autonomy was not significant. In an analysis comparing self-employed workers with employers, self-employed (mean 3.7) feels more interesting (p <.001) than employers (mean 3.2), but job satisfaction and a sense of autonomy was not significant. In the analysis, autonomic and competent factors were not independent. Yamashita's scale had two questions on autonomy, and the Fray & Benz study had one question on autonomy. The autonomy may not be clearly interpreted in Japanese that does not speak English. We use the Deci et al. Scale. Using 2001 and Baard and Deci Ryan 2004, the autonomy of self-decision theory is confirmed in several items and considered as a construct. The results will be reported at the conference.

“Are the effects of self-control depletion on financial risk-taking domain specific?”

Tuesday 12:30 (HOGAN MEZZANINE FOYER).

Christopher Wilson (Teesside University) with Nazila Wilson.

Abstract:
It is generally accepted are bad at making financial decisions and the multitude of cognitive biases and heuristics that affect these decisions are well-studied (e.g. Kahneman, 2003; Magiera, 2008). Moreover, there has been much focus on improving low levels of financial literacy, which is linked to higher levels of consumer debt and high-cost loans (Disney and Gathergood 2013) and led to the development of a range of interventions at a national and international level (OECD 2016). However, there is increasing evidence that additional psychological factors - psychological traits and emotional states - significantly influence financial decisions (Cassoti et al., 2012; Gathergood 2012). Self-control is believed to play a key role in individual financial decision making (e.g., Achtziger, 2015). However, self-control is a multi-dimensional construct that is still under examination (Duckworth and Kern 2011). Moreover, the use of non-experimental designs in many of the studies which connect self-control and financial risk-taking leaves room for further examination of the processes through which these two constructs interact (Venz et al. 2016).
The dominant explanation is the strength model of self-control (Baumeister, Vohs, and Tice, 1998), which posits that engaging in self-control uses up a limited cognitive resource which, upon depletion, leads to a short-term state of “ego-depletion” (Baumeister et al. 1998). Ego-depletion is said to impair subsequent attempts to exert self-control, which impacts decision-making (e.g. Fischer, Kastenmüller, and Asal 2012, Macrae et al. 2014; Neshat-Doost, Dalgleish, and Golden, 2008). Further examination of this theory has led to some questions as to whether the effects of ego-depletion on risk-taking are consistent (Gerhardt 2017), whether self-control capacity is indeed limited (Inzlicht, Schmeichel, and Macrae 2014) or whether there are additional contextual factors involved in the ego-depletion effect (Nolet et al. 2016).

Indeed, Brevers et al. (2018) have argued for a process account, as opposed to the capacity model; stating that it is sufficient to trigger the semantic content of “have to” conduct in order to affect subsequent “want to” activities, regardless of capacity depletion. However, this study did not directly compare the capacity and process models. They also employed general self-control cues, which were not specifically tied to financial decision-making, when there is evidence that financial control might have specific effects (Kapitan, Ross, and Silvera 2018). Adamkovič and Martončík (2017) explain how the resource theory of self-control might impact financial decision-making in a cyclical fashion. That is, under financial pressure, the constant need to regulate in relation to basic needs depletes cognitive resources and can lead to reduced levels of self-control.

The aims of the current study are twofold: to specifically compare the capacity and process models of ego-depletion on financial risk-taking; to examine whether the effects of self-control on financial decision-making are general or domain specific.

To these ends, the following hypotheses were tested:

H1: Ego-depletion leads to higher levels of risk-taking, relative to the control conditions.

H2: Self-control cueing affects levels of risk-taking, with domain-specific cues resulting in higher levels of risk-taking than domain-general cues.

H3: There is an interaction between the effects of ego-depletion and cueing on financial risk-taking.

The study employs a 3 (Ego-depletion task condition: Depletion condition, Control condition, No task condition) x 3 (Self-control cue specificity: Domain specific, Domain general or Control) independent, experimental design (see Figure 1). The Ego-depletion task used is a version of the Stroop test, which facilitates ego-depletion by requiring inhibitory control (e.g. Kelley, Finley, and Schmeichel (2019)). Two versions of the Stroop task are employed, along with the No task condition: the Depletion condition included both congruent and non-congruent stimuli, whereas the Control condition included only congruent stimuli. Consistent with Dahm et al. (2011), this design is used to facilitate a more effective comparison of the effects of depletion, given that any comparison to No task would likely show some effect. The self-control cues are presented as part of the financial choice (coin-toss) task, with the Domain specific cues focusing on financial self-control and the Domain general cues focusing on general self-control behaviours. The dependent variable is risk-taking behaviour, measured as the number of risk-taking responses made on the financial choice (coin-toss) task.

Covariate measures taken include Trait self-control (The Brief Self-control Inventory: Lindner, Nagy, and Retels-dorf, 2015), Impulsiveness (The Barratt Impulsiveness Scale: Stanford et al., 2009) and Risk proclivity (The Domain-specific Risk-attitude Scale: Weber, Blais, and Betz, 2002).
To examine whether ego-depletion or domain specificity of self-control cues predicted likelihood of risk-taking in coin-toss trials, the data are analysed using a binomial logistic regression model. Results from the study will be discussed in the context of ego-depletion and its effects on financial decision-making and the effects of finance-specific self-control on financial risk-taking.

“Immoral money promotes pro-social behavior”
*Tuesday 12:30 (HOGAN MEZZANINE FOYER).*

*Hongchuan Zhang (Central University of Finance and Economics, China) with Yan Li.*

Abstract:
Money may be attached to a morality label, depending on the means how it is acquired. The moral compensation theory proposed that one may use compensatory behaviour to buffer the sense of immorality. The present study aimed to examine whether sense of immoral money may promote participants’ prosocial behaviour as a compensating mechanism. Our pilot study asked 109 participants to rate 27 sources of acquired money based on their sense of morality. The results showed that money by income was rated with highest sense of morality, whereas money by fraud was rated with highest sense of immorality. These two sources were thus used to prime the sense of moral and immoral money in the following studies. Study 1a asked 102 college students to imagine acquired 100 thousand Yuan (about 15000 Dollars) either by income or by fraud, then answering the question how guilty they felt after receiving the amount, before filling the Prosocial Behaviour Scale. The mediation analysis revealed that sense of guilty partially mediated the impact of sense of immoral money on prosocial behaviour. Study 1b primed 220 participants recruited in a community with the same procedure in Study 1a and asked them to indicate their willingness and amount to donate to a patient in need of surgery cost. Again, sense of guilty plays a partial mediating factor between sense of immoral money and prosocial behaviour. To confirm the robustness of the above link, Study 2 recruited 87 college students and asked them to play a coin flip game on the computer in a secret room. They were asked to play the game ten rounds and took the money (1 Yuan for each winning round) based on their self-report, while the winning standard was set to 3 rounds by the system. Therefore, any participant who took more than 3 Yuan would be deemed as immoral money group. After the game, they were invited to donate any amount to the Red Cross in a box. The results showed that participants who took money by fraud would donate significantly more money than those who took money not by fraud. Taken in all, our findings confirmed a compensatory mechanism of immoral money promoting prosocial behaviour, partially mediated by sense of guilty.

“Proximity preferences from the gambler’s fallacy bias support a replenishment heuristic under conditions of loss”
*Tuesday 12:30 (HOGAN MEZZANINE FOYER).*

*Sirin Zhang (Vassar College) with J. Mark Cleaveland, Jacob Goebel.*

Abstract:
The gambler’s fallacy bias is defined as the avoidance of a previously “winning” alternative, despite a constant probability of its occurrence. Traditionally, the gambler’s fallacy bias has been interpreted
as the result of what is known as the “representativeness heuristic” (Tversky and Kahneman, 1971). This heuristic asserts that subjects act as if segments of any length of a random sequence must reflect the true proportion. In other words, the representativeness heuristic claims that people tend to exaggerate the degree to which a small sample represents the parent population. Rather than treating the gambler’s fallacy as the result of a fixed, cognitive bias, more recent research has begun to consider the bias as the outcome of learning. For example, Ayton and Fischer (2004) suggest that the gambler’s fallacy isn’t based so much on a misunderstanding of randomness as it is on learned responding to naturally occurring circumstances. They hypothesize that the gambler’s fallacy occurs when subjects approach a problem as if they are choosing in an environment in which outcomes depend upon rates of replenishment. Such a process would be akin to the foraging behaviour observed in many organisms.

In the reported experiments we attempted to distinguish between the potential influence of a representativeness heuristic vs. a replenishment heuristic on the gambler’s fallacy bias. In Experiment 1, subjects were placed in a gambling task in which 4 coins had to be drawn from a bank and bet at five alternatives arranged in a linear array. On any given trial, all alternatives had an equal chance of being selected as a “winner.” Coins bet at the winning location were multiplied by a fixed constant and added back to the subject’s bank. In addition, subjects were provided with a list of recent winning locations. Four groups were run differing in terms of the list-length of recent winners (n = 1 vs. n = 5) and in terms of the potential gains / loss per trial (low vs. high). We found that providing differential sample sizes of recent winners did not affect the prevalence or strength of a gambler’s fallacy bias. However, in subjects that did display this bias, we observed a trial-by-trial preference for alternatives that were spatially close to the avoided alternative.

In Experiment 2, we deconstructed Experiment 1 into two groups of subjects: Gain vs. Loss. On every trial subject were provided with 6 coins to freely allocate among six alternatives arranged in a linear array. One alternative was then randomly selected. In one group, “Gain,” subjects simply accumulated any coins allocated to the selected alternative. In a second group, “Loss,” any coins allocated to the selected alternative determined how much money was subtracted from an existing bank. We found evidence of a gambler’s fallacy bias in both the Gain and Loss groups. As in Experiment 1, we also observed a trial-by-trial preference for alternatives that were spatially close to the selected alternative. However, this proximity phenomenon was only evident in the Loss Group.

Taken together, our results do not support the representativeness heuristic as an explanation for the gambler’s fallacy bias. Such a bias would have predicted a negative correlation between the size of a representative sample (our list size) and the strength of a gambler’s fallacy bias. We found no such influence. In addition, the representative heuristic is silent about our observed proximity preferences. Both Experiments 1 and 2 found evidence that gambler’s fallacy subjects behaved as if spatial neighbours of a previously occurring alternative were more likely to occur on a subsequent trial. Such a finding is reminiscent of area restricted foraging behaviour (Cheng, 1992), and supportive of a replenishment heuristic.