RESEARCH ARTICLES

PAPERS IN PEER-REVIEWED JOURNALS

[24] "Equity Rules in Ultimatum Bargaining with Asymmetric Outside Options", **revise and resubmit**, *International Journal of Game Theory*, with B. IRLENBUSCH, H. HENNIG-SCHMIDT & R.M. RILKE.

Abstract. We experimentally investigate multiple notions of equity in ultimatum bargaining with asymmetric outside options. Building on the generalized equity principle formulated by Selten (1978), we derive three different equity rules that can explain 43% of all proposals. Our between- and within-subject design further allows us to show that proposers use different equity rules and apply them in a self-serving manner. They tend to follow the rules that suggest the highest payoff for them. The equity principle also explains 26% of responders' minimal acceptable offers. Like for proposers, their choices also tend to exhibit a similar pattern of self-serving behavior. Combined, these tendencies lead to high inefficiency due to frequent rejections.

[23] "Measuring single constructs by single items: Constructing an even shorter version of the "Short Five" personality inventory", **revise and resubmit**, *PLOS ONE*, with K. KONSTABEL, J.-E. LÖNNQVIST, S. LEIKAS, R.G. VELÁZQUEZ, H. QIN & M. VERKASALO.

Abstract. The aim of this study was to construct a short, 30-item personality questionnaire that would be, in terms of content and meaning of the scores, as comparable as possible with longer, well-established inventories such as NEO PI-R and its clones. To do this, we shortened the formerly constructed 60-item "Short Five" (S5) by half so that each subscale would be represented by a single item. We compared all possibilities of selecting 30 items (preserving balanced keying within each domain of the five-factor model) in terms of correlations with well-established scales, self-peer correlations, and clarity of meaning, and selected an optimal combination for each domain. The resulting shortened questionnaire, XS5, was compared to the original S5 using data from student samples in 6 different countries (Estonia, Finland, UK, Germany, Spain, and China), and a representative Finnish sample. The correlations between XS5 domain scales and their longer counterparts from well-established scales ranged from 0.74 to 0.84; the difference from the equivalent correlations for full version of S5 or from meta-analytic short-term dependability coefficients of NEO PI-R was not large. In terms of prediction of external criteria (emotional experience and self-reported behaviours), there were no important differences between XS5, S5, and the longer well-established scales. Controlling for acquiescence did not improve the prediction of criteria, self-peer correlations, or correlations with longer scales, but it did improve internal reliability and, in some analyses, comparability of the principal component structure. XS5 can be recommended as an economic measure of the five-factor model of personality at the level of domain scales; it has reasonable psychometric properties, fair correlations with longer well-established scales, and it can predict emotional experience and self-reported behaviours no worse than S5. When subscales are essential, we would still recommend using the full version of S5.

[22] "Team Goal Incentives and Individual Lying Behavior", **forthcoming in:** *Die Betriebswirtschaft (DBW)*, with J. CONRADS, M. ELLENBERGER, B. IRLENBUSCH, E.N. OHMS & R.M. RILKE.

Abstract. In this article we examine the influence of two goal compensation schemes on lying behavior. Based on the die rolling task of Fischbacher/Föllmi-Heusi (2013), we apply an individual goal incentive scheme and a team goal incentive scheme. In both settings individuals receive a fixed bonus when attaining the goal. We find that under team goal incentives subjects are less inclined to over-report production outputs beyond the amount which is on average necessary for goal attainment. Investigating subjects' beliefs on their team mates' behavior under team goal incentives reveals that subjects who either believe that lying is not profitable (i.e., the team goal cannot be reached with a lie) or not absolutely necessary (i.e., there is a good chance that the team goal can also be reached without lying) tend to be honest. We also find that subjects who believe that the team goal has already been reached by their team mates tend to over-report production outputs. Across treatments, women are found to be more honest than men. Subjects' personality is not associated with reported production outputs. Our work contributes to previous research on how different compensation schemes affect unethical behavior in organizational settings.

[21] "Measuring Individual Risk Attitudes in the Lab: Task or Ask? An Empirical Comparison", **forthcoming in:** *Journal of Economic Behavior & Organization,* with J.-E. LÖNNQVIST, M. VERKASALO & P.C. WICHARDT.

Abstract. This paper reports on an empirical comparison of two prominent measures of individual risk attitudes – the Holt and Laury (2002) lottery-choice task and the multi-item questionnaire advocated by Dohmen, Falk, Huffman, Schupp, Sunde and Wagner (2011) – with respect to their within-subject stability over time (one year) and their correlation with actual risk-taking behavior in the lab – here the amount sent in a trust game (Berg, Dickaut, McCabe, 1995). Our results suggest that the two risk attitude measures are at best only weakly correlated. Only the questionnaire measure shows high test-retest stability, while virtually no such stability is found in the lottery-choice task. In addition, only the questionnaire measure shows the expected correlations with a Big Five personality measure and is correlated with actual risk-taking behavior. With respect to behavior in the trust game, we find a high retest stability of transfers. This supports the conjecture that trusting behavior has a component which itself is a stable individual characteristic.

[20] "Negotiations Among Chinese and Germans – An Experimental Case Study", **forthcoming in**: *Homo Oeconomicus*, 32(3), 2016, with H. HENNIG-SCHMIDT.

Abstract. This paper aims to better understand negotiation behaviour between Germans and Chinese. We study intra- and inter-cultural bargaining in negotiations with asymmetric outside options. Our analysis is based on team decisions and verbal transcripts of video-recorded within- and between-team discussions. The data show the importance of aspiration formation in combination with equity concerns. Before the negotiation starts, all teams already have formulated goals that can be traced during the subsequent negotiation. Moreover, all first offers and demands and the majority of final outcomes represent equitable shares of the amount at stake. Teams often agree upon the 'Split the Difference' allocation, which represents a feasible and justifiable compromise. Chinese typically gather as much information on their counterparts as possible, anticipate and simulate their counterparts' behavior and make harmony an issue. German teams, however, put great emphasis on fairness issues and aim at efficient outcomes by reaching an acceptable payoff within reasonable time.

[19] "On why hypocrisy thrives: Reasonable doubt created by moral posturing can deter punishment", *Journal of Experimental Social Psychology*, 59, 2015, with J.-E. LÖNNQVIST & R.M. RILKE.

Abstract. In four bargaining games with an option to punish, participants could avoid punishment by shifting the blame for an unfair offer on a random coin flip. Punishments were not affected by whether the results of the coin flip could be verified, nor by beliefs about whether a coin had actually been flipped (Studies 1–3). Our results suggest that the rather blatant moral posturing of hypocrites was enough to create reasonable doubt about their guilt, and that such doubt deterred punishment. Alternative explanations of reluctance to punish hypocrites, such as free-riding from altruistic punishment (Study 2), or feelings of gratitude (Study 3) were not supported. Independent third parties were also less punitive toward those who blamed the coin (Study 4). Similar results were found in an online vignette study run with a more representative sample (Study 5). In sum, these findings suggest that hypocrisy thrives because it can deter punishment.

[18] "Sex- and Ethnicity Based Discrimination and the Maintenance of Self-Esteem", *PLOS ONE*, 2015, 10(5): e0124622. doi:10.1371/journal.pone.0124622, with J.-E. LÖNNQVIST & H. HENNIG-SCHMIDT.

Abstract. The psychological underpinnings of labor market discrimination were investigated by having participants from Israel, the West Bank and Germany (N = 205) act as employers in a stylized employment task in which they ranked, set wages, and imposed a minimum effort level on applicants. State self-esteem was measured before and after the employment task, in which applicant ethnicity and sex were salient. The applicants were real people and all behavior was monetarily incentivized. Supporting the full self-esteem hypothesis of the social identity approach, low self-esteem in women was associated with assigning higher wages to women than to men, and such behavior was related to the maintenance of self-esteem. The narrower hypothesis that successful intergroup discrimination serves to protect self-esteem received broader support. Across all participants, both ethnicity- and sex-based discrimination of out-groups were associated with the maintenance of self-esteem, with the former showing a stronger association than the latter.

[17] "Moral Hypocrisy – Impression Management or Self-Deception?", *Journal of Experimental Social Psychology*, 55, 2014, 53-62, with J.-E. LÖNNQVIST & B. IRLENBUSCH.

Abstract. In three studies (S1–S3; *N* = 256) we investigated whether moral hypocrisy (MH) is motivated by conscious impression management concerns or whether it is self-deceptive. In a dictator game, MH occurred both within participants (saying one thing, doing another; S1) and between participants (doing one thing when it is inconsequential, doing another thing when it affects payoffs; S2). People were willing to let an ostensibly fair coin determine payoffs only if they could fudge the results of the coin flip, suggesting that hypocrites do not deceive themselves (S3). Also supporting this view, MH was associated with adherence to Conformity values (S1–S2), indicative of a desire to appear moral in the eyes of others but not indicative of self-deception. Universalism values were predictive of moral integrity (S1, S3).

[16] "Honesty in Tournaments", *Economics Letters*, 123, 2014, 90-93, with J. CONRADS, B. IRLENBUSCH, R.M. RILKE & A. SCHIELKE.

Abstract. We apply the die rolling experiment of Fischbacher and Föllmi-Heusi (2013) to a two-player tournament incentive scheme. Our treatments vary the prize spread. The data highlights that honesty is more pronounced when the prize spread is small.

[15] "Lying and Team Incentives", *Journal of Economic Psychology*, 34, 2013, 1-7, with J. CONRADS, B. IRLENBUSCH & R.M. RILKE.

Abstract. We investigate the influence of two popular compensation schemes on subjects' inclination to lie by adapting an experimental setup of Fischbacher and Heusi (2008). Lying turns out to be more pronounced under team incentives than under individual piece-rates, which highlights a fairly neglected feature of compensation schemes. Moreover, when disentangling different motives of the more pronounced unethical conduct under team incentives we find that subjects tend to lie more under team incentives because they can diffuse their responsibility, i.e., their deceptive acts cannot unambiguously be attributed to them individually. Our findings are robust even when controlling for individual difference variables. In both compensation schemes subjects who are younger, male, high on Extraversion, and high on Neuroticism tend to lie more.

[14] "Personal Values and Pro-Social Behaviour in Strategic Interactions: Distinguishing Value-Expressive from Value-Ambivalent Behaviours", *European Journal of Social Psychology*, 43, 2013, 554-569, with J.-E. LÖNNQVIST, M. VERKASALO & P.C. WICHARDT.

Abstract. Relying on the framework provided by Schwartz' (1992) theory of personal values, we investigated whether values can help explain pro-social behaviour. We first distinguished value-expressive behaviours from value-ambivalent behaviours. The former are compatible with primarily one value or with congruent values, the latter with mutually conflicting values. In Study 1, an analysis over all 41 (39 unpublished) samples in which we measured personal values and pro-social behaviour in monetarily incentivized strategic interactions (*N* = 1289; data collected 2007-2010) supported our idea that personal values, Universalism in particular, predict value-expressive (Prisoner's Dilemma co-operation, Trust Game back-transfers) but not value-ambivalent behaviours (Trust Game transfers, Ultimatum Game proposals and responses). Study 2 (*N* = 56) focused on Dictator Game behaviour, which we expected and found to be strongly value-expressive. The findings contribute to the on-going discussion on whether and under which circumstances values shape behaviour.

[13] "The "Short Five" (S5): Measuring Personality Traits Using Comprehensive Single Items", *European Journal of Personality*, 26, 2012, 13-29, with K. KONSTABEL, J.-E. LÖNNQVIST, K. KONSTABEL & M. VERKASALO.

Abstract. A new approach to the construction of short questionnaires is introduced: "comprehensive single items" (CSI) are developed with the intention to match expert descriptions of a construct as closely as possible. Based on this idea, a 60-item questionnaire, the "Short Five" (S5) is constructed for measuring 30 facets of the Five-Factor Model. Studies in Estonian, Finnish, English, and German showed that the S5 domain scales had correlations over 0.8 with their counterparts in longer questionnaires, and that the factor structure was similar to that of the normative US NEO-PI-R sample. The S5 can be recommended for large-scale studies where participants' time is limited. The CSI approach can be successfully used in short scale development, in addition to more traditional methods.

[12] "Personality Disorder Categories as Combinations of Dimensions: Translating Cooperative Behavior in Borderline Personality Disorder into the Five-Factor Framework", *Journal of Personality Disorders*, 26, 2012, 298–304, with J.-E. LÖNNQVIST, P.C. WICHARDT & M. VERKASALO.

Abstract. The authors examined the proposal that personality disorder categories may denote particular detrimental combinations of personality dimensions. A multiround economic exchange game (ten round trust game), conducted with university students pre-selected on basis of their personalities (N = 164), provided a framework within which to investigate inability to repair ruptured cooperation. This behaviour, thought to be characteristic of patients diagnosed with DSM–IV borderline personality disorder, was predicted only by the combination of high Neuroticism and low Agreeableness. Our results highlight an advantage of the categorical approach, category labels being a much more economic means of description than the delineation of interactions between dimensions.

[11] "Situational Power Moderates the Influence of Self-Transcendence vs. Self-Enhancement Values on Behavior in Ultimatum Bargaining", *Journal of Research in Personality*, 45, 2011, 336-339, with J.-E. LÖNNQVIST, P.C. WICHARDT & M. VERKASALO.

Abstract. We examined the interactive effects of personal values and situational power on proposer and responder behavior in an ultimatum bargaining game. The current literature suggests that situational power could moderate the influence of personal values on behavior. For proposers (N = 107), high scores on the Self-Transcendence vs. Self-Enhancement value dimension predicted higher proposals, but only among participants told that they were in a powerful position. For responders (N = 95), high scores on the Self-Transcendence vs. Self-Enhancement value dimension predicted accepting smaller proposals, but again only among participants told that they were in a powerful position. Our results support the idea that high situational power elicits behavior more consistent with one's standing on the Self-Transcendence vs. Self-Enhancement value dimension.

[10] "It Pays to Pay – Big Five Personality Influences on Cooperative Behavior in an Incentivized and Hypothetical Prisoner's Dilemma Game", *Personality and Individual Differences*, 50, 2011, 300–304, with J.-E. LÖNNQVIST & M. VERKASALO.

Abstract. The authors investigated how the presence or absence of monetary incentives in a prisoner's dilemma game may influence research outcomes. Specifically, the predictive power of the Big Five personality traits on decisions in an incentivized (N = 60) or hypothetical (N = 60) prisoner's dilemma game was investigated. Participants were less generous in the incentivized game. More importantly, personality predicted decisions only in the incentivized game, with low Neuroticism and high Openness to Experience predicting more cooperative transfers. The influence of Neuroticism on behaviour in the incentivized game was mediated by risk attitude. The results are consistent with other results suggesting that the Big Five are relevant predictors of moral behaviour, and with results suggesting that the determinants of hypothetical decisions are different from the determinants of real decisions, with the latter being more revealing of one's true preferences. The authors argue that psychologists, contrary to prevailing praxis, should consider making their participants' decisions more real. This could allow psychologists to more convincingly generalize laboratory findings into contexts outside of the laboratory.

[9] "On the Prevalence of Framing Effects Across Subject Pools in a Two Person Cooperation Game", *Journal of Economic Psychology*, 31, 2010, 849–859, with S.J. GOERG.

Abstract. In this experimental study, involving subjects from Abu-Dis (West Bank), Chengdu (China), Helsinki (Finland), and Jerusalem (Israel), we test for a presentation bias in a two-person cooperation game. In the positive frame of the game, a transfer creates a positive externality for the opposite player, and in the negative frame, a negative one. Subjects in Abu-Dis and Chengdu show a substantially higher cooperation level in the positive externality treatment. In Helsinki and Jerusalem, no framing effect is observed. These findings are also reflected in associated first-order beliefs. We argue that comparisons across subject-pools might lead to only partially meaningful and opposed conclusions if only one treatment condition is evaluated. We therefore suggest a complementary application and consideration of different presentations of identical decision problems within (cross-cultural) research on subject-pool differences.

[8] "The Moderating Effect of Conformism Values on the Relations Between Other Personal Values, Social Norms, Moral Obligation, and Single Altruistic Behaviours", *British Journal of Social Psychology*, 48, 2009, 525–546, with J.-E. LÖNNQVIST, P.C. WICHARDT, M. LINDEMAN & M. VERKASALO.

Abstract. Three studies predicted and found that the individual's conformism values are one determinant of whether behaviour is guided by other personal values or by social norms. In Study 1 (N = 50), pro-gay law reform participants were told they were either in a minority or a majority in terms of their attitude towards the law reform. Only participants who were high in conformism values conformed to the group norm on public behaviour intentions. In studies 2 (N = 42) and 3 (N = 734), participants played multiple choice prisoner's dilemma games with monetary incentives. Only participants who considered conformism values to be relatively unimportant showed the expected connections between universalism values and altruistic behaviour. Study 3 also established that the moderating effect of conformism values on the relation between universalism values and altruistic behaviour was mediated through experienced sense of moral obligation.

[7] „Benachteiligung wegen mangelnden Vertrauens? Eine experimentelle Studie zur Arbeitsmarktintegration von Strafgefangenen", *Monatsschrift für Kriminologie und Strafrechtsreform*, 6, 2009, 526-546, with A. FALK & W. WIRTH.

Abstract. Die Benachteiligung von vorbestraften Bewerbern am Arbeitsmarkt stellt ein wichtiges und zugleich komplexes Problem dar. Trotz großer Plausibilität ist ein statistisch einwandfreier Nachweis von Diskriminierung with den gewöhnlich zur Verfügung stehenden Daten äußerst schwierig. Der Beitrag beschreibt ein kontrolliertes Entscheidungsexperiment, das Einstellungs- und Lohnzahlungs-entscheidungen sowie Vertrauenserwartungen von Studenten in nicht vorbestrafte und vorbestrafte Bewerber misst und vergleicht. Unsere Ergebnisse zeigen, dass ehemalige Strafgefangene deutlich geringere Chancen besitzen, überhaupt eingestellt zu werden und einen im Vergleich angemessenen Lohn zu erhalten. Neben der Vorstrafe spielt die Nationalität des Bewerbers eine entscheidende Rolle. Darüber hinaus können wir zeigen, dass Einstellungsentscheidungen nicht nur auf einem geringeren Vertrauen gegenüber Vorbestraften basieren, sondern dass Haftentlassene hier bewusst benachteiligt werden. Unser Forschungsansatz ist in Hinblick auf die zu untersuchende Fragestellung innovativ und wurde bislang weder in der einschlägigen soziologischen, noch in der wirtschaftswissenschaftlichen Literatur verwendet.

OTHER PUBLICATIONS

[6] „Corporate Volunteering in der Personalpraxis", *Personal im Fokus*, 6, 2013, 30-32, with P. BEREND.

[5] „Welchen Beitrag kann die experimentelle Wirtschaftsforschung zur Förderung ethischen Handelns in der Wirtschaft leisten?", *WISU – Das Wirtschaftsstudium*, 5, 2012, S. 681-868, with B. IRLENBUSCH & J. BERND.

[4] „Ethik und experimentelle Wirtschaftsforschung – Beiträge zum Lügenverhalten", *Forum Wirtschaftsethik*, 2, 2011, S. 27 – 36, with B. IRLENBUSCH & A. NESCHEN.

[3] "On Cooperation and Trust in Strategic Games – Behavioral Evidence from the Middle East and Europe", *Dissertation*, 2010, Universität Bonn, Staatswissenschaftliche Fakultät, Supervisors: R. SELTEN & A. FALK.

[2] „Effektive Koordination", *Harvard Business manager*, August 2007, S. 14-15, with P. BEREND.

[1] „Kultur und Vertrauen – Interkulturelles Vertrauen? Ein experimentelles Spiel with Deutschen, Argentiniern und Chinesen", *Diplomarbeit*, 2003, Humboldt-University of Berlin, Lehrstuhl für Management, Supervisors: J. SCHWALBACH & C. OBERHAMMER.