Symposium Organizers
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Location:
Birkbeck, University of London
Malet Street, Bloomsbury
London WC1E 7HX
Location: Room 532

The 5th London Reasoning Workshop: Thursday the 29th – to Friday the 30th of July 2010

The 5th London Reasoning Workshop
Thursday the 29th of July

09:30-10:00	**Tea & Coffee in room 534. Welcome by Mike Oaksford**
	Symposium 1: Dual Processes and Induction
10:00-10:35	Valerie Thompson: Choosing between intuition and reason: The role of metacognition in initiating analytic thinking
10:35-11:10	Shira Elqayam: Dual processing, incommensurability, and the matrix of the new paradigm in reasoning
11:10-11:45	Aiden Feeney: Relevance, garden path arguments, and category-based inductive reasoning
11:45-12:05	**Tea & Coffee in room 534**
	Symposium 2: Connectives and Inconsistency
12:05 – 12:40	Alessandra Tasso: The Perceived equivalence in meaning between conditionals and disjunctions: A second experiment.
12:40:13:15	Sunny Khemlani: Explanations make inconsistencies harder to detect
13:15-14:30	**Lunch**
	Symposium 3: Logic and Logical Approaches
14:30-15:05	Igor Douven: Conditionals and conditional acceptability.
15:05-15:40	Alexandra Varga & Michiel Lambalgen: Infants' Closed world Reasoning about what to do, When, What for
15:40-16:00	**Tea & Coffee in room 534**
16:00-16:35	Wilfrid Hodges: Logical rules at deep syntactic levels: a request for cognitive help in history of logic
16:35-17:10	John Fox: Arguing about the evidence: a logical approach
17:10	**Wine reception**

* Indicates speaker

Birkbeck
UNIVERSITY OF LONDON

The 5th London Reasoning Workshop
Friday the 30th of July 2010

BBK, University of London, Malet Street, Bloomsbury, London WC1E 7HX
Location: Room 532

09:30-10:00	**Tea & Coffee in room 534**
	Symposium 4: Probabilities and Reasoning
10:00-10:35	Gernot Kleiter: Stochastic response models in human reasoning
10:35-11:10	David Over, Constantinos Hadjichristidis, Steven A. Sloman: Inference from uncertain premises: Jeffrey's doesn't completely rule
11:10-11:45	Niki Pfeifer: Experiments on Aristotle's Thesis: New evidence against the material conditional interpretation
11:45-12:05	**Tea & Coffee in room 534**
12:05-12:40	Nilufa Ali: The effect of causal order on the rules of inference
12:40-13:15	Marco Ragni & Benedikt Becker: A Bayesian Model for Spatial Reasoning with Cardinal Directions
13:15-14:30	**Lunch**
	Symposium 5: Pragmatics and Processing
14:30-15:05	Denis Hilton, Marie Juanchich and David Over: From is to ought (not): Effects of linguistic polarity on the performative functions of indicative conditionals
15:05-15:40	Jean-Francois Bonnefon: Deduction from If-Then Personality Signatures
15:40-16:00	**Tea & Coffee in room 534**
16:00-16:35	Erika Shilling: Presentation and discussion of a deontic version of the selection task, using everyday social scenarios and ground rules between close friends or partners
16:35-17:10	Bastien Tremoliere: Allocating Executive Resources for Reasoning under Mortality Salience
17:10	**Close**

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Abstracts

Valerie Thompson

Title: Choosing between intuition and reason: The role of metacognition in initiating analytic thinking
Authors: Valerie Thompson, Jamie Prowse Turner, and Gordon Pennycook (University of Saskatchewan, Canada), Jonathan Evans (University of Plymouth, UK).

It is well-documented that reasoners often give intuitively compelling, but normatively erroneous, answers to a variety of reasoning problems. Although there has been much research on the content of these intuitions, little is understood about what makes them compelling. We suggest that the answer is fundamentally metacognitive: Initial answers to reasoning problems are accompanied by a Feeling of Rightness (FOR), the strength of which is determined by the fluency with which the initial answer comes to mind. To test this hypothesis, we have developed a two-response paradigm, in which reasoners are asked to provide an initial, intuitive response to a problem, give an FOR judgment, and then rethink their initial answer. Using this paradigm with a variety of common reasoning tasks, we have obtained evidence that the fluency with which an initial answer is produced predicts FOR judgments. Moreover, the strength of this FOR is consequentially linked to reasoning outcomes: When the FOR is strong, reasoners are likely to give the intuitive answer, when the FOR is weak, they are more likely to re-formulate the problem. Finally, we show that intuitive answers to common reasoning problems are produced more fluently than their less intuitive counterparts.

Shira Elqayam

Title: Dual processing, incommensurability, and the matrix of the new paradigm in reasoning

That psychology of reasoning is in the process of a paradigm shift seems beyond dispute (Evans, in press; Manktelow, Over, & Elqayam, in press; Over, 2009). What still seems moot, however, is the nature of the shift. In this talk I propose an approach to the new paradigm in reasoning in terms of a Wittgenstein family, and examine its heuristic value. While such approach has an unavoidable price in terms of giving up on defining features, it is closer to Kuhn's original conception of a paradigm, which makes a comprehensive use of the notion of exemplar. I will examine several candidates for such exemplars in reasoning, focusing in particular on two theoretical conceptions – the probabilistic approach and the role of dual processing. I will argue that, given the extensional space demarcated by these exemplars, neither concept on its own is necessary or even sufficient for characterising the new paradigm, although both do and should figure predominately in its matrix. Of the two, dual processing is the more controversial, as it seems to have played a role in the previous paradigm, too. However, I will argue Kuhn's criterion of incommensurability applies in both cases.

Aiden Feeney

Title: Relevance, garden path arguments, and category-based inductive reasoning

Aidan Feeney (Queen's University Belfast), John D. Coley (Northeastern University) & Aimee K. Bright (Durham University)

When we evaluate a category-based inductive argument we must decide how likely it is that a property possessed by members of one or more categories is also possessed by members of another category. In response to a range of problems for similarity-based accounts of category-based induction, Medin et al (2003) proposed a relevance-based account. According to the relevance framework, reasoners generate hypotheses about the

relevant relation between the categories in the argument. Recently, structured Bayesian accounts have been proposed which can also capture data problematic for similarity-based accounts. We designed three premise 'garden-path' arguments where the same third premise was either consistent or inconsistent with likely hypotheses about the relevant relation. In Experiment 1 we show that effort expended processing consistent premises (measured via reading times) was significantly less than effort expended on inconsistent premises. In Experiment 2 we demonstrated a direct relation between cognitive effect and cognitive effort. For garden path arguments, belief change given inconsistent third premises was significantly correlated with premise three and conclusion reading times. For consistent arguments the correlation between belief change and reading times did not approach significance. These results support the relevance framework for induction but are difficult to accommodate under other approaches.

Alessandro Tasso

Title: The perceived equivalence in meaning between conditionals and disjunctions: A second experiment.

Alessandra Tasso*, Andrea Manfrinati**, Paolo Cherubini***, Pierdaniele Giaretta**
** Università di Ferrara – Italy, **Università di Padova – Italy,*** Università di Milano Bicocca – Italy*

Previous experiments about the relation in meaning between conditionals and logically equivalent disjunctions show that conditionals like "If p then q" are understood and asserted even if their antecedent turns out to be false, when they are preceded (Manfrinati, 2007; Giaretta et al., 2007) or followed (Richardson & Ormerod, 1997; Ormerod & Richardson, 2003) by a disjunction like "not p or q" that is true/false in the same situations.

In a previous study, we showed that the perceived relationship in meaning between conditionals and the related explicit disjunctives is affected by content, order, type of conditional form, and polarity (Tasso et al., 2009).

The aim of the present experiment is to replicate and to extend the results already obtained. Specifically we investigated how the perceived equivalence in meaning is affected by the following variables: order (conditionals first *versus* disjunction first), polarity (p, not p, q, not q), figure ("if p then q" *versus* "if q then p").

Results show that the figure of the conditional and the presentation order interact with polarity in affecting equivalence participant's judgments.

Sunny Khemlani

Title: Explanations make inconsistencies harder to detect

Authors: Sangeet Khemlani and Phil Johnson-Laird

Abstract: What role do explanations play in reasoning about inconsistencies? We postulate that when people create explanations, they use them to resolve conflicting information. This hypothesis predicts that inconsistencies should be harder to detect once individuals have in mind an explanation of the inconsistency. We report four experiments that tested this prediction. Experiments 1a and 1b corroborated the effect when participants made inferences from inconsistent assertions. Experiment 2 compared the effect of explanations of inconsistencies with those of a similarly demanding task. Experiment 3 ruled out a potential confound.

Igor Douven

Title: Conditionals and conditional acceptability

Abstract: According to Adams' Thesis, the acceptability of a conditional sentence "If A, B" goes by the probability of B conditional on A. In philosophy, there is almost universal agreement that this thesis is correct. However, we present data that refute the thesis. We also propose a new hypothesis about the acceptability of conditionals. According to this hypothesis, the acceptability of conditionals goes by conditional acceptability rather than by conditional probability. The concept of conditional acceptability will be elucidated and hopefully at the workshop we will already have some data relevant to the hypothesis.

Michiel Lambalgen

Title: Infants' Closed-World Reasoning about What to Do, When, What for

Based on developmental evidence, we intend to model the reasoning claimed to explain preverbal children's selective reenactment of observed novel instrumental actions. The benefit of formalization is twofold: it corroborates the claim that reasoning processes support infants' behavioral performance, and it may lead to precise experimental predictions. We outline a formalization in terms of the Event Calculus..

We first introduce the task (Gergely et al. 2002). An adult demonstrates to 14-month-olds an unfamiliar head touch as a new means to turn on a light-box. Half the infants see that the demonstrator's hands are occupied while executing the head action (Hands-Occupied condition – HO), the other half observe her acting with hands visibly free (Hands-Free condition – HF). Subjects are then given the chance to act upon the light-box themselves. Reenactment of the novel head action is selective: 69% of the infants in the HF, and only 21% in the HO. Moreover Kiraly et al. (2004) have shown that selectivity is contingent on a communicative action demonstration. This involves that throughout the demonstration the experimenter behaves prosocially towards the infant seated in front of her, using non-verbal (eye contact, then gaze shift to the target object) as well as verbal ('Look, Baby, I'll show you something!') communicative-referential cues. In the absence of these cues, when the novel action is performed aloof (no infant-directed gaze or speech) and spatially distant from the infant, the reenactment rate is always below chance level, with no significant difference between conditions.

Children begin segmenting the demonstrated event stream through perceptual processing, and motor abilities are eventually required for action. Nevertheless such basic capacities cannot fully account for the different reenactment rates in the two conditions. Because selectivity of goal-directed actions involves goal-centered and context-dependent processing, it requires the following higher-level abilities:

> **Causal knowledge and teleological action understanding**. Empirical evidence shows that understanding actions as being *for* something (the 'teleological stance'), and an underlying grasp of physical causal relations, are available in the first year of life (Csibra & Gergely 2007).
>
> **Flexibility.** Children's selection of goal-directed actions depends on the physical, as well as the social features of the context of observation.
>
> **Credulousness.** A credulous interpretation of actions means lending credence to the observed agent. It allows including communicatively demonstrated novel means into one's own action plans.

Reasoning processes coalesce these cognitive skills. Infants behave as *rational* observers and, consequently, *rational* actors. The reasoning that follows the initial perceptual parsing is two-staged: teleological interpretation of the context, and backward action planning. The output from the interpretation stage shapes

planning. The transition is monitored by meta-reasoning, depending on second-order, non-physical contextual features (e.g. the communicative cues mentioned earlier).

We propose that these processes are guided by flexible use of closed-world assumptions (Stenning & van Lambalgen 2008). These require one to start reasoning in a minimal model, whereby only physical features are relevant. Flexibility allows the incorporation, under certain conditions, of the agent's intentions for actions. The basic format is the closed-world assumption for reasoning about abnormalities (CWA(ab)), which prescribes that, *If there is no positive information that something is amiss, assume that nothing abnormal is the case.* Closed-world reasoning is instantiated in the language of the Event Calculus (van Lambalgen & Hamm 2004) with logic programming as an inference engine. That such formalisms are cognitively relevant was demonstrated in Stenning & van Lambalgen (2008). We now sketch how (1) – (3) above call upon closed-world reasoning.

Interpretation proceeds in two steps: goal derivation, and means-ends structuring of the context. First, in conformity with the teleological stance, young reasoners set a goal placeholder and engage in goal derivation. Logic programming represents the teleological stance as an 'integrity constraint' on reasoning, resolved via forward inferential processes, resulting in a concrete goal. Because novelty generates uncertainty, the derived goal is defeasible. In the task described the initial goal hypothesis is the interpretation-laden physical end-state of the context (perceptually available to children), "light-on".

Second, the aim is to establish an exhaustive means-ends structure of the context, framed by the goal. This is a causal appraisal of events constrained by closed-world assumptions for reasoning about causality, e.g. *Only those events occur, which are causally forced to occur by the data*. Here, the data binding the occurrences of events are causal justifications, either forward-looking (the goal – light-on), or backward-looking (the physical contextual constraints – hands hold blanket, hands lay on the table). If more causal chains are identified, events are "forced to occur by the data" when the chains can be causally integrated with respect to each other. In HO all events are causally justified: *because* the hands are *for* holding the blanket, the head action is *for* lighting the box. They are also integrated: the latter is forced to occur by the hands' involvement in the "hold blanket" action, together with the assumption that an object (e.g. a hand) cannot exert causal influence in different locations simultaneously. Teleological interpretation is exhaustive. In HF, the agent's static hands are not causally justified: they lay on the table *for* nothing and *because of* nothing; hence the context cannot be causally integrated. The head action is not forced to occur by the observable data. This furnishes "positive information that something is amiss", hence CWA(ab) is not warranted. Further decision is required as to whether the teleological model grounded in the "light-on" goal needs to be expanded, to include the novel action in the infant-actor's language of planning, e.g. by incorporating the novel action in the goal.

We suggest that such decisions are taken at the meta-level. Closed-world assumptions require parsimony with respect to allowing abnormalities in one's computations because they increase cognitive effort and processing time. In a non-communicative HF context, credulousness is not supported and meta-reasoning does not turn the under-explained head action into abnormality; planning proceeds from the initial goal. In a communicative HF context, meta-reasoning demands reinterpretation. The abnormality is resolved by goal revision. The new goal derivation allows social, communicative justifications for actions. A goal is attributed to the intentional context taken as a whole, and it incorporates the abnormal novel action. The revised goal is then "head-action and light-on".

The output of (re)interpretation is the goal to be realized by the infant, "light-on" in HO, and "head-action and light-on" in HF. It constitutes the input for the second stage of reasoning whereby infants plan their own actions. Through backward chaining, the goal is reduced to sub-goals that infants may enact, i.e. hand-action in HO, and head-action in HF.

All in all, infants' selective reenactment of observed novel goal-directed actions thus understood can be formalized in the Event Calculus. The rationality exhibited by children in these tasks is thus a form of non-monotonic reasoning.

Wilfrid Hodges

Title: Logical rules at deep syntactic levels: a request for cognitive help in history of logic

Abstract: Modern logic uses two kinds of inference rule (quantifier rules and identity rules) that are 'deep' in the sense that they apply to components at arbitrary syntactic depth in sentences. (I.e. arbitrarily far down the phrase-marker - this is not the Chomsky sense of 'deep'.) Traditional aristotelian logic has no deep rules. Since the early Middle Ages many logicians were aware of a gap here. The prevailing view in traditional logic seems to have been that it's cognitively too difficult to apply monotonicity rules - as in syllogisms - at a deep level, and the slack has to be taken up by paraphrase. In recent years the 'natural logic' view has maintained that the medievals were right not to use deep quantifier and identity rules because these are rules not 'natural', particularly in a logic of natural language; but that there is a 'natural' deep form of monotonicity which the medievals were working towards. My belief is that in its empirical content the 'natural logic' view has things exactly the wrong way round. The medievals were quite right to regard deep monotonicity as not feasible for human reasoners, but there is nothing unfeasible about the use of deep quantifier or identity rules in natural language reasoning. I think there are testable cognitive questions here, but the questions don't seem to fit present paradigms. The talk will propose some example questions, though I am sure they are not optimal and it will need collaboration between historians and psychologists of logic to set up effective tests.

John Fox

Title: Arguing about the evidence: a logical approach

To appear in ***Evidence, Inference and Enquiry*** (Editors: Philip Dawid, William Twining, Mimi Vasilaki**)** Publisher: The British Academy

Evidence-based practice is the norm in law and science, and is increasingly demanded in fields like clinical medicine and social policy. As pressures for *evidence-based-everything* grow there is a concomitant need to develop clear ways of discussing evidence and, ideally, formal ways of reasoning with and about it. Unfortunately the concept of evidence differs across different domains so we must first find some unifying framework. One influential tradition has it that *evidence is any kind of information that increases or decreases confidence in a hypothesis or claim, and that a good tool for formalizing the notion of confidence is mathematical probability*. The view developed here accepts the first part of this tradition but argues that the second part is frequently impractical. An alternative is proposed in which confidence is determined first by logical argumentation and second by considering the range and relative strength of these arguments. Two complementary modes of argumentation are discussed. *Evidential argumentation* builds on the common sense notion that the more supporting (opposing) arguments there are for a claim the more (less) our confidence in it. *Dialectical argumentation* builds on the equally commonplace observation that confidence is influenced by arguments that "attack" or "corroborate" each other as well as directly supporting or opposing claims. This framework is discussed in terms of a number of desirable features of any system for arguing about evidence, and is illustrated with examples drawn from evidence-based decision-making in medicine.

Gernot Kleiter

Title: Stochastic response models in human reasoning

The contribution investigates stochastic response models in the field of probabilistic models of reasoning. Stochastic response models replace precise point probabilities by "imprecise" interval probabilities or by "imprecise" second order probability distributions. A stochastic response model assumes that the beliefs in

premises and conclusions are unstable and fluctuating and that the responses result from sampling from such unstable representations. Erev, Wallsten and Budescu have shown that stochastic response models ex-plain overconfidence effects in probability judgments (calibration). They have shown that stochastic response models predict systematic effects and not just low reliabilities. The present contribution shows that this holds also for many reasoning tasks. Special attention is payed to explain results observed in re-search on the conjunction fallacy, on categorical syllogisms, especially on the understanding of the modus tollens, and on non-monotonic inference. A rea-soner may maintain a perfectly coherent competence model, but produce in-coherent responses because of random sampling from an imprecise interval or from a distribution.

David Over

Title: "Inference from uncertain premises: Jeffrey's doesn't completely rule"

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Jeffrey's rule/conditionalization is a normative proposal for updating an old degree of belief to a new one, changing Pold(b) to Pnew(b), in the face of new but still uncertain evidence, Pnew(e) < 1. It generalizes Bayesian "simple" conditionalization, inferring that Pnew(b) = Pold(b|e) when Pnew(e) = 1. Jeffrey's rule states that Pnew(b) = Pold(b|e)Pnew(e) + Pold(b|not-e)Pnew(not-e). Recent research has shown that people judge the probability of a conditional, P(if e then b), to be the conditional probability, P(b|e). Thus the simple rule applies to diachronic Modus Ponens, in which Pnew(b) is inferred from Pold(if e then b) and Pnew(e), when Pnew(e) = 1. Jeffrey's rule applies when Pnew(e) < 1 and a judgment can also be made about Pold(if not-e then b). Diachronic MP is an almost totally neglected topic in the psychology of reasoning, in spite of its obvious importance. Oaksford & Chater have suggested that Jeffrey's rule could be used in their account of conditional reasoning, and we will present studies of whether people do conform to this rule in their belief updating. The results imply that people do not completely comply with it.

Niki Pfeifer

Title: Experiments on Aristotle's Thesis: New evidence against the material conditional interpretation

I will present two experiments (N1=141, N2=40) on two versions of Aristotle's Thesis, which has previously not been investigated empirically. Aristotle's Thesis is a negated conditional, which consists of one propositional variable with a negation either in the antecedent (version 1) or in the consequent (version 2). I will discuss in which ways this task allows to infer if people interpret indicative conditionals as material conditionals or as conditional events. In the first experiment I investigate between-participants the two versions

of Aristotle's Thesis crossed with abstract versus concrete task material. The modal response for all four groups is consistent with the conditional event and inconsistent with the material conditional interpretation. This observation is replicated in the second experiment. Moreover, the second experiment rules out some ambiguities with respect to the scope of the negation. Both experiments provide new evidence against the material conditional interpretation of conditionals and support the conditional event interpretation. Finally, I will discuss implications for modeling human inference.

Nilufa Ali

"The effect of causal order on the rules of inference"

Inferential predictions of causal and logical interpretations of the conditional, if P then Q, are tested experimentally. The predictions diverge sharply when we consider inferences involving pairs of conditionals, such as if P1 then Q, if P2 then Q. From a causal perspective, the causal direction of these conditionals is critical: is P a cause of Q; or a symptom caused by Q. The rich variety of inference patterns can naturally be modelled by Bayesian networks. A pair of causal conditionals corresponds to a ―collider‖ structure where the two causes converge on a common effect, whereas a pair of diagnostic conditionals corresponds to a net where two effects diverge from a common cause. Very different predictions are made by fully explicit or initial mental models interpretations. These predictions were tested in three experiments, each of which yielded data most consistent with the ―deep‖ causal structure of conditionals! , rather than their ―surface‖ logical form.

Marco Ragni & Benedikt Becker

Title: A Bayesian Model for Spatial Reasoning with Cardinal Directions

How do we reason with imprecise spatial descriptions? Do reasoners typically prefer one conclusion (over another) consistent with the imprecise descriptions? Based on empirical findings we are able to give a positive answer for the second question for spatial reasoning with cardinal direction relations. We further present a computational model for reasoning with cardinal directions based on Bayesian rationality (following Oaksford & Chater, 2007). It is to reproduce the preferences among the potential answers of ambiguous task items by probability distributions. This is achieved by implementing some heuristics on detours and, as an extension, a priming effect.

Denis Hilton, Marie Juanchich and David Over

Title: From is to ought (not): Effects of linguistic polarity on the performative functions of indicative conditionals

How can the statement of an indicative conditional (*if p then q*) have an impact on decision making? We propose a pragmatic perspective in which the framing of uncertainty expression gives polarity to conditional advice. E.g. "If Anne takes out this loan, it's not certain that her business will work out" vs. "If Anne takes out this loan, there is a chance that her business will work out". Using a within-subjects design, the first experiment demonstrated the performative function of polarity in conditional advice. Our results confirm that the polarity of conditional advice has a significant impact on willingness to recommend an action to a third party. In a second experiment using a within-subject design, we studied two potential mediators of the polarity effect on this decision: the perceived balance of pro and con reasons and the subjective probability of q if not p (P(q/notp)). Our mediation hypotheses by P(q/notp) and by the perceived balance of reasons are rejected,

suggesting that the speaker's choice of polarity may have a more direct impact on the hearer's attitude to performing the action.

Jean-François Bonnefon

Title: Deduction from If-Then Personality Signatures

Personality signatures are if-then rules describing how a given person would feel or act in a specific situation. These rules can be used as the major premise of a deductive argument, but they are mostly processed for social cognition purposes; and this common usage is likely to leak into the way they are processed in a deductive reasoning context. It is hypothesized that confidence in a Modus Ponens argument featuring a personality signature as its major premise is affected by the reasoner's own propensity to display this personality signature. To test this prediction, Modus Ponens arguments were constructed from conditionally phrased items extracted from available personality scales. This allowed to record (a) confidence in the conclusion of these arguments, and (b) the reasoner's propensity to display the personality signature, using as a proxy this reasoner's score on the personality scale without the items used in the argument. Three experiments (N=256, N=318, N=298) applied this procedure to Fairness, Responsive Joy, and Self-Control. These experiments yielded very comparable effects, establishing that a reasoner's propensity to display a given personality signature influences this reasoner's confidence in the conclusion of a Modus Ponens argument featuring the personality signature.

Erika Shilling

Title: Influences of perceived self-relevance and emotional content on cheater-detection task performance as rationally biased?

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Beliefs, processes and behaviours that reliably contribute to goal achievement can be understood as being instrumentally rational, or as affording instrumental rationality. Which of one's goals dominate within a particular context may be dependent, at least in part, upon one's perspective and preferences; the utility of information and choice can be altered by social and emotional contexts. To allow exploration of these hypotheses, participants (N = 90) completed six everyday, deontic versions of the four-card selection task, within which emotional content was embedded (2 positive, 2 anxiogenic, 2 neutral). Their task was to imagine either themselves or an unknown other within each situation context, and to select information about subsequent behaviour to determine whether or not a 'friend' had broken a ground rule in the situations described. Ground rules were preceded by moderate cheater expectation cuing. Significant interactions between self-relevance and emotional content on falsification and confirmation indices were observed (ps < .001). In response to anxiogenic content, for example, participants in self-relevant contexts showed a marked tendency not to select information that might provide evidence of rule breaking by friends: participants in other-relevant contexts showed an increased tendency to select possible evidence of rule breaking. Findings are discussed in terms of the possible influences of perspective, preferences and discrete emotions within mental representation and processing (salience, self-relevance, costs-benefits, preferences and framing), and upon choice. Implications of these findings for accounts of dual process, mental models and rationality will also be explored.

Bastien Tremoliere

Title: Allocating Executive Resources for Reasoning under Mortality Salience

The human species enjoys uniquely developed capacities for rational reasoning and decision-making, but these capacities come with a price, as they make us aware of our inevitable physical death. Drawing on Terror Management Theory and Dual-Process theories of cognition, we investigate the impact of mortality consciousness on rational reasoning. Experiment 1 shows that experimentally induced thoughts of death increase intuitive processing on a belief bias task. Experiment 2 shows that this effect preempts that of a classic cognitive load manipulation. Furthermore, Experiment 2 shows that the detrimental effect of mortality consciousness on reasoning reflects the fact that reasoners must allocate executive resources to the suppression of their death thoughts: under high cognitive load, suppression itself is impaired, and death thoughts are still significantly activated at the end of the reasoning task.

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Birkbeck's emergency number **555** may be dialled from any Birkbeck telephone (except Bedford and Tavistock Square) to **report** any safety/security emergency and/or to **request help. "555"** calls are routed to a dedicated 'phone manned at all times by a Duty Attendant who will summon the required assistance, by dialing 999 if need be. It is imperative that a **"555"** caller identifies him/herself, specifies the assistance required and states in which building and location in that building the emergency exists. Many classrooms and lecture theatres have phones within them for this and other purposes.

Thank you,
Birkbeck Fire Officer