The 3d London Reasoning Workshop

Festschrift for Jonathan Evans: 18th -19th of August 2008

Venue

BBK, University of London Malet Street, Bloomsbury
London WC1E 7HX Location: Room 532, Birkbeck College, 5th floor

Symposium Organizers
Professor Mike Oaksford (Birkbeck, University of London)
Ms Eirini Mitropoulou, (Birkbeck, University of London)
(i.mitropoulou@psychology.bbk.ac.uk**).**

The 3d London Reasoning Workshop: Festschrift for Jonathan Evans
Monday 18th of August 2008

09:00-09:20	***Tea & Coffee in room 534.*** ***Welcoming prologue by Mike Oaksford in room 532***
09:20-09:55	Denis Hilton *, Laetitia Charalambides, Stéphanie Hoareau & David Over: Reasoning about rights and duties: Mental models and social utilities.
09:55-10:30	Walter Schroyens *: A critical evaluation and crucial test of the suppositional-conditional theory about iffy propositions.
10:30-11:05	Wim De Neys: Conflict monitoring and dual process theories.
11:05-11:30	***Tea & Coffee in room 534.***
11:30-12:05	Shira Elqayam*: Do we need a relativist view of rationality?
12:05-12:40	Pfeifer, N. *& Kleiter, G. D: Uncertain deductive reasoning.
12:40-13:15	Guy Politzer * & David Over: Conditional bets.
13:15-14:30	***Lunch***
14:30-15:05	Nick Chater* & Mike Oaksford: Formal measures of confirmation and argument strength.
15:05-15:40	Valerie Thompson*: Determinants of the Feeling of Rightness in Conditional Inference.
15:40-16:00	***Tea & Coffee in room 534.***
16:00-16:35	Keith Stenning* & Michiel van Lambalgen: Logic knocks at the gates of System 1.
16:35-17:35	Jonathan Evans*: Psychology of reasoning: Reflections on four decades of research.
17:35-	***Wine reception: Room 534***
* Indicates speaker	

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The 3d London Reasoning Workshop: Festschrift for Jonathan Evans
Tuesday 19th of August 2008

BBK, University of London, Malet Street, Bloomsbury, London WC1E 7HX
Location: Room 532, Birkbeck College, 5th floor

09:00-09:20	***Tea & Coffee in room 534.***
09:20-09:55	Geoff Goodwin*: Is the basic conditional probabilistic?
09:55-10:30	Philippe Chassy* & Denis Hilton: Perceived Causality in Temporal Chains.
10:30-11:05	Caren A. Frosch* & P.N. Johnson-Laird: Refuting causal claims.
11:05-11:30	***Tea & Coffee in room 534.***
11:30-12:05	Jean-Frangois Bonnefon*: Utility matrices and folk principles of choice: Decision processes leak into conditional inference.
12:05-12:40	S. J. Handley* & S.E. Newstead: Default logic and effortful beliefs.
12:40-13:15	Akira Nakagaki*: Matching heuristic cannot explain matching bias in conditional reasoning.
13:15-14:30	***Lunch***
14:30-15:05	Hiroshi Yama*: A dual process model for cultural differences in hindsight bias.
15:05-15:40	Hartmut Blank*, Steffen Nestler & Gernot von Collani: Hindsight components and causal reasoning.
* Indicates speaker	

Speakers:

Akira Nakagaki:	nakagaki.akira@gmail.com
Caren Frosch	c.frosch@reading.ac.uk
David Over:	david.over@durham.ac.uk
Denis Hilton	hilton@univ-tlse2.fr
Geoffrey Goodwin:	ggoodwin@Princeton.EDU
Gernot Kleiter	gernot.kleiter@sbg.ac.at
Guy Politzer:	politzer@univ-paris8.fr
Hartmut Blank	Hartmut.Blank@port.ac.uk
Hiroshi Yama	yama@mail.kobe-c.ac.jp
Jean-François Bonnefon:	bonnefon@univ-tlse2.fr
Jonathan Evans	J.Evans@plymouth.ac.uk
Keith Stenning:	keith@inf.ed.ac.uk
Mike Oaksford:	m.oaksford@bbk.ac.uk
Nick Chater:	n.chater@ucl.ac.uk
Niki Pfeifer:	Niki.pfeifer@sbg.ac.at
Philippe Chassy:	philippe.chassy@orange.fr
Shira Elqayam	selqayam@dmu.ac.uk
Simon Handley:	S.Handley@plymouth.ac.uk
Valerie Thompson:	Valerie.Thompson@usask.ca
Walter Schroyens:	Walter.Schroyens@Ugent.be
Wim De Neys:	wim.deneys@psy.kuleuven.be

Abstracts

Reasoning about rights and duties: Mental models and social utilities.
Denis Hilton, Laetitia Charalambides, Stéphanie Hoareau (University of Toulouse) and David Over (University of Durham).

We examine deontic rules where a social group (e.g. the state) lays down a rule intended to regulate individual conduct. These rules may either be rights or duties. In a first experiment, we find that rules that are identified as rights (e.g. "People out of work may claim unemployment benefit") are generally considered to benefit the individual (rule addressee), whereas rules that are identified as duties (e.g. "People who take an SNCF train must stamp their ticket") typically benefit the social group (rule-giver). Consequently, rule violations in the case of rights are cases where someone takes the benefit without having the right (notP & Q), and in the case of duties are cases where someone fails to perform his expected duty (P & notQ). Using a conceptual replication of a deontic reasoning task designed by Bucciarelli & Johnson-Laird (2005), we show that knowledge of rule content (rights vs. duties) influences perceptions of deontic permissibility above and beyond the influence of the deontic modal verb used in the affirmation of the rule (may, must, forbid, may not). In addition, rule content influences a measure of the relevance of various cases (P&Q, P&notQ, notP&Q notP&notQ for explaining the rule).The results illustrate differing predictions derived from mental models and utility-based approaches to deontic reasoning, and are used to compare the two frameworks.

A critical evaluation and crucial test of the suppositional-conditional theory about iffy propositions
Walter Schroyens; University of Gent

Suppositional-conditional theory explains the relevance of false-antecedent cases -- as evidenced by truth-table studies, showing that <not-p.not-q> are often judged to make <if p then q> true -- by means of pragmatic implicatures: if p then q pragmatically invites its converse <if q then p> and/or its inverse <if not-p then not-q>. Neither the converse, nor inverse implicature (and/or their combination) yields a pattern of truth-table task evaluations that is consistent with the material-implication interpretation, in which only <p.not-p> makes the rule false, while other cases are neither irrelevant nor false. I present truth-table task evidence (based on six new experiments) showing that a significant proportion of people do exhibit material-implication patterns/interpretations; thus showing suppositional-conditional theory is incomplete (and false in this respect). The theory also follows a dual-processing schema and supposes analytic processing has an override function as regards the output of primordial heuristic processes. In the theories' account of conditional-inference task performance the pragmatic implicatures (i.e, "simple equivalence reasoning") are heuristic in nature, while hypothetical thinking (i.e. reduction-ad-absurdum reasoning) is analytic in nature. The reduction-ad-absurdum argument (used to solve MT: if p then q, not-q therefore p) however can not fulfill its presumed override function. The suppositional-conditional theory is, thus, theoretically inconsistent and/or ambiguous as regards the relation between heuristic and analytic processes it proffers.

Do we need a relativist view of rationality?
Shira Elqayam; De Montfort University

Accounts of normative rationality face a problem when more than one normative system can be applied to a specific empirical paradigm. Any attempt to arbitrate between normative accounts using empirical data runs into the problem of having to derive normative, 'ought' conclusions from indicative, 'is' premises – what is called the 'is-ought fallacy' or the 'naturalistic fallacy'. One possible solution has been proposed by Searle (1964), who makes a distinction between 'brute facts', that describe objective facts, and 'institutional facts', that depend on human-created institutions such as money or making a promise. Searle's point is that, for institutional facts, and in particular for speech acts that perform a deontic function, inferring the 'ought' from the 'is' is justifiable, as both carry evaluative positions. However, institutional facts are often culturally-dependent, so adapting Searle's solution may require opting for a relativist, social-constructivist view of normative rationality. Would such a solution not pull the rug out from the very idea of normative rationality? I discuss the implications for normative rationality in reasoning and JDM, drawing on comparisons to linguistics.

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Uncertain deductive reasoning
Niki Pfeifer & Gernot Kleiter;University of Salzburg

Probabilistic models have started to replace classical logic as the standard reference paradigm in human deductive reasoning. Mental Probability Logic emphasizes general principles (like non-monotonicity or the understanding of conditionals) where human reasoning deviates from classical logic, but agrees with a probabilistic approach. Unfortunately though, Mental Probability Logic (like several similar models) says little about the cognitive representation and the processing of the probabilities. The present contribution scans various representational formats with respect to their capability to express and process uncertainty in deductive reasoning. Examples are neural networks, production systems, Bayesian networks, or visual representations. They study multiple kinds of processes for forming and manipulating representations (including associative, symbolic, diagrammatic, etc.). Probabilities are conceived as degrees of belief that describe incomplete knowledge states. In this context we discuss epistemic states in the philosophy of mind, meta-cognition, phenomenal consciousness, and in epistemic logics. Special attention is devoted to conditionals. The difference between asserted and contemplated (assumed) propositions plays an important role in the Ramsey test of the conditional and in counterfactual reasoning. Finally, we will substantiate the theoretical considerations by reporting the results of new experiments.

Conditional bets
Guy Politzer & David Over

We briefly discuss the theoretical importance of conditional bets. We investigate the semantics and pragmatics of these bets, *I bet you that if A then C.* This initial investigation is limited to the extensional case using very simple materials (a few chips in two different shapes and two different colours), so eliminating any computational difficulty. A variety of questions are asked, centrally the following. What are the chances of winning the bet? Losing the bet? Of when the condition is not fulfilled (the crucial case of a *void* bet)? For the chances of winning the bet, the conditional probability is by far the most frequent interpretation (about 60%), while the conjunctive interpretation culminates at about 20%. These results are compared to those of Jonathan Evans and his collaborators on other forms of conditional.

Formal measures of confirmation and argument strength
Nick Chater & Mike Oaksford

One key normative challenge in inductive inference is to provide a measure of how far data confirms (or disconfirms) a scientific theory; a related question for theories of argument concerns how to measure the strength of an inferential relationship between premises and conclusion. Both these questions have implications for psychological theories of domains in which inductive or argumentative strength are assessed by human participants, whether directly or indirectly. This talk outlines a new axiomatic approach to these questions, arguing for different formal measures of inductive and argumentative strength, and asking how these may relate to the psychology of reasoning.

Determinants of the Feeling of Rightness in Conditional Inference
Prof. Valerie Thompson; University of Saskatchewan

According to Dual Process Theories (DPT), automatic System 1 (S1) processes give rise to contextualised representations and attendant judgments that are seldom analysed extensively by deliberate, decontextualised System 2 (S2) processes. A crucial issue for DPT's is to identify the circumstances under which S2 does intervene. In this talk, I will outline a framework for predicting S2 intervention that is based on a metacognitive experience associated with S1 processes, termed the Feeling of Rightness (FOR). In addition, I will present some preliminary data that demonstrate how the FOR can be measured and that test hypothesis regarding the bases for this judgment (e.g., fluency of answer retrieval, familiarity of the problem, believability of the conclusion, etc).

Logic knocks at the gates of System 1
Keith Stenning; Edinburgh University; Michiel van Lambalgen; University of Amsterdam

Evans' dual process account of human reasoning grew out of the subfield known as the 'psychology of deduction' which is strongly influenced by a particular conception of the relation between logic and human reasoning, one in which there is a single logical competence model (classical logic) to which actual human reasoning may or may not conform. The resulting conception of dual processes identifies System 2 processes as 'logical' thinking and System 1 processes as non-logical (associative, pragmatic, . . .). Psychologically System 1 processes are fast, cheap, automatic, inaccessible, not-isolable from general knowledge, and primitive; whereas System 2 processes are slow, expensive of cognitive effort, requiring deliberate control, are isolated from knowledge, available to conscious reflection, and evolutionarily advanced, possibly uniquely human. This characterisation of System 1 and 2 processes thus elevates some of the features of reasoning according to classical logic, e.g. slowness, necessity of deliberate control, into general characteristics of reasoning. We claim, however, that the view of the relation between logic and reasoning that underlies the proposed division between System 1 and System 2 processes is obsolete, and that a more adequate conceptualization of this relation calls for a different division between the two systems. We agree that it is necessary to take seriously observations of dual processes with gross psychological characteristics as outlined above, but we argue that logics (of different kinds) underlie both Systems 1 and 2. Natural language provides a first example. Much of natural language processing as studied in psycholinguistics has all the external properties of System 1 (fast, automatic, etc.). Nevertheless, both language comprehension and production can be seen to involve a fast, automatic and defeasible reasoning process that construct 'situation models' or 'discourse models' of what is heard and said. This reasoning process involved is closed world reasoning (CWR), which proceeds on the assumption that whatever is not forced to be true can be taken to be false. For example, because my knowledge base does not force me to conclude that an asteroid will hit the earth tomorrow, I assume this will not happen. CWR is non-monotonic in the sense that conclusions ' that have been drawn on the basis of information I may have to be retracted when new information becomes available. Non-monotonic logics have the reputation of being intractable and therefore unsuitable for the psychological study of human reasoning, but in fact they can be very efficient checking whether a

putative conclusion follows from given premises can be done in polynomial time, much faster than in classical logic. Thus there is no principled reason to view the difference between System 1 and System 2 as characterised by the absence or presence of a logical reasoning engine. One reason why the traditional way of distinguishing System 1 and System 2 has seemed so persuasive is the notion that there can be only one logical competence model, to wit classical logic. Since reasoning in classical logic has many System 2 features (which are the opposite of System 1 features) and since classical logic is the only cognitively relevant logic (if at all), it follows that logic can play no role in System 1. But the conclusion fails because neither from a logical nor from a cognitive point of view does classical logic enjoy a privileged status. In formal logic, there are numerous systems for logical reasoning, each tied to an intended domain of application. There does not exist an argument to the effect that only classical logic is 'normatively justified'. Whether a logic is justified for the domain of interest
depends on the structure of that domain: diagnostic reasoning about diseases and symptoms obeys different laws than reasoning about mathematical objects assumed to exist independently of human minds (the latter domain is governed by classical logic, the former isn't). This paper builds on a program of research starting from a more adequate modern conception of the multiplicity of logics. It assumes that the task of interpreting the experimental materials of the staple tasks of the'psychology of deduction' is a substantial part of the problem facing subjects in these experiments, that interpretation can be viewed as imposing a logical form on these materials, and that the logical interpretations which result are the chief determinants of subjects reasoning. This approach throws new empirical and theoretical light on the main experimental paradigms of the field (among which the selection task [Stenning and van Lambalgen, 2004], the suppression task [Stenning and van Lambalgen, 2005], syllogistic reasoning [Stenning and Cox, 2006]), in particular explaining what have been claimed to be 'content' effects as logical interpretation effects, and opening the way to explanations of the generality of human reasoning [Stenning and van Lambalgen, 2006]. An important range of logics required are defeasible nonmonotonic logics, and evidence accumulates that for most subjects these are likely to be a first interpretational resort. [van Lambalgen and Hamm, 2004] have shown how these same logics can be applied to a range of problems in temporal discourse semantics. Furthermore, these logics can be used to derive verifiable (and verified) predictions concerning electrophysiological correlates of language processing (ERPs) [Baggio and van Lambalgen, 2007, Baggio et al., 2007]. Returning to reasoning, in an attempt to model the 'credulous' process of interpretation as it occurs in the suppression task [Byrne, 1989], [Stenning and van Lambalgen, 2005] adopt a family of fast and efficient default logics based on logic programing, which formalise closed world reasoning. These logics are highly tractable, allowing the computation of unique 'intended models' of sets of assumptions together with databases of 'general knowledge' conditionals in linear time. They show that this logic, given a suitable three-valued semantics, is susceptible to neural network implementations in recurrent neural networks (see also [Stenning and van Lambalgen, 2008, Chapter 8]). The classical logic assumed to constitute logic by most of the psychological subfield (but see [Evans, 2003] for an at least partial exception) is well known to be resistant to any such efficient treatment. Unusually for a neural network treatment, there is a plausible outline available of the processes which create the working memory/long term memory networks which represent discourse interpretations. This outline draws on neuroscience studies of the different timescales of plasticity required [von der Malsburg, 1981]. Here we will argue that once it is acknowledged that non-monotonic logics are at the centre of human discourse interpretation (reasoning tasks being a special kind of discourse), explorations of their tractability become highly relevant to the basis of the distinction between dual processes. The paper concludes with a discussion of implications for the relation between System 1 and Systems 2 in the development of communication and learning, and in evolutionary accounts of how the modern human cognitive architecture arose. Defeasible logics related to that proposed for System 1, are known as 'planning logics' and underlie low-level motor planning in some approaches to robotics [Shanahan, 1997]. This accords with an idea proposed by several strands of research that the continuity of human language with ancestral cognition is to be sought in planning rather than communication capacities [Greenfield, 1991] [Arbib and Rizzolatti, 1997]. On this view recursion, far from being the critical innovation of human langauge evolution [Hauser et al., 2002], is already a feature of our ancestors' cognition, but its employment in social interaction is the innovation that led to language. Our ancestors' working memories were capable

of holding their model of their current situation and goals, as supported by their long term representations of environmental regularities and their current perceptual input. However, they had quite severe limitations in the 'semantic distance' possible between this model and the current situation. System 1 processes continually defeasibly updated this model as information arrived or goals changed. In humans, the possible semantic distance between working memory model and current situation is hugely extended, and this capacity has to be supported by sophisticated interpretational machinery which can accommodate the fact that the interpretation of working memory often has highly indirect implications for action. We propose that System 2 processes arose by the development and extension of interpretative supervisory systems driven by the need to repair breakdowns in interpretation arising in System 1. Such breakdowns inevitably occur both in individual cognition and an social communication. The balance of forces between these two modes is of course one of the major unsolved problems of human cognitive evolution.

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Is the basic conditional probabilistic?
Geoff Goodwin, University of Pennsylvania

According to the mental model theory a “basic” conditional is one that has no relation between its antecedent and consequent other than their co-occurrence in the conditional, and the conditional asserts that the antecedent's occurrence suffices for the consequent to occur. In contrast, a variety of recent theories of the conditional contain a probabilistic component, e.g., a person's belief in a conditional is the conditional probability of the consequent given the antecedent. One implication of these probabilistic theories is that there is no important difference between the claim “if p then q” and “if p then probably q”. In two experiments, I show that individuals do in fact use these claims differently. They have a much greater propensity to describe deterministic patterns of data with the phrase “if p then q”, and probabilistic patterns with the phrase “if p then probably q”. A third experiment examines how individuals choose to describe sets of possibilities that are consistent with the model theory’s basic conditional, and shows that they correctly select the core conditional the majority of the time. Both findings corroborate the model theory.

Perceived Causality in Temporal Chains
Philippe Chassy & Denis Hilton; University of Toulouse, France

We distinguish between temporal-aleatory and temporal-causal chains. Temporal-aleatory chains describe a permutable sequence of probabilistic events (e.g. coin tosses) that determine an outcome, whereas temporal-causal chains describe a permutable sequence of events that produce an effect. Previous research on recency effects has focused on causal attribution in temporal-aleatory chains, and has produced contradictory results. Using two-event temporal chains, we find that events are considered as less causal in temporal-aleatory chains than in temporal-causal chains. We also find that recency effects in causal judgment are at best weak and depend on response format in temporal-aleatory chains, but are stronger and more robust in temporal-causal chains. Finally, we show that recency effects in temporal-causal chains can be explained by a subjective-probability updating model of causal judgment.

Refuting causal claims
Caren A. Frosch; University of Reading
P.N. Johnson-Laird; Princeton University

The mental model theory proposes that causes and enablers are logically distinct and therefore understood by keeping different possibilities in mind (Goldvarg & Johnson-Laird, 2001). A cause, such as a spark, brings about an outcome, such as a fire, whereas an enabler, such as oxygen, makes it possible for the outcome to occur. Hence, ‘A causes B’ is consistent with three possibilities: A and B where A precedes B in temporal order, not-A B, not-A and not-B; whereas ‘A enables B’ is consistent with these contrasting possibilities: A and B where A precedes B in temporal order, A and not-B, and not-A not-B. It follows from the theory that a causal claim should tend to be refuted by an observation of A and not-B, but an enabling claim should tend to be refuted by an observation of not-A and B. Three experiments corroborated this prediction. Furthermore, contrary to probabilistic theories, participants were satisfied more often than not that a single observation could refute causal and enabling claims. When they did request further observations, they did so more often for enabling than for causal claims. We discuss our findings in the context of theories of causality, including probabilistic accounts of causation.

Utility matrices and folk principles of choice: Decision processes leak into conditional inference.
Jean-Frangois Bonnefon; CNRS

"If p, then q" conditionals play a pivotal role in rational mental activities, as they are involved in contemplative deductive reasoning as well as in consequential decision making. Under some conditions, decision making processes (i.e., the consequential approach toconditionals) are likely to leak into deductive processes (i.e., the contemplative approach to conditionals). I offer a general theory of this phenomenon, based on two key notions: The utility matrix of a conditional (that summarises all the decision-relevant information it contains), and a non-exhaustive list of principles of the folk theory of decision (which summarise the way people think people make their decisions). The combination of utility matrices and folk principles of decision provides a powerful toolbox to classify nonstandard conditionals and to predict the paralogical inferences they trigger.

Default logic and effortful beliefs
Handley, S.J. & Newstead, S. E.: *University of Plymouth*

According to dual process accounts of thinking belief based responses on reasoning tasks are generated as default, but can be intervened upon in favour of logical responding, given sufficient time, effort or cognitive resource. In this paper we present the results of five experiments in which participants were instructed to evaluate the conclusions of conditional arguments either on the basis of their logical validity or on the basis of their believability. Contrary to the predictions arising from these accounts, the logical status of the presented conclusion had a greater impact on judgments concerning its believability; than did the believability of the conclusion on judgments about whether it followed logically. This finding was observed when instructional set was presented as a between participants factor (Experiment 1), when instruction was indicated prior to problem presentation by a cue (Experiment 2), presented with varying cue delays (Experiment 3) and when the cue appeared simultaneously with conclusion presentation (Experiments 4 and 5). In these latter experiments belief based judgments took significantly longer than those made under logical instructions. We discuss the implications of these findings in the context of recent work which suggests that reasoning on the basis of beliefs is resource demanding.

Matching heuristic cannot explain matching bias in conditional reasoning.
Akira Nakagaki; Waseda University

Matching bias is a robust phenomenon which has for many years presented a challenge to various theories of propositional reasoning (Evans, 1998). In order to explain matching bias, Evans (1999) has proposed a matching-heuristic which directs attention to cases explicitly stated in the rules regardless of the presence of negations. In this presentation, the author would try to show that the explanation by the matching heuristic is implausible. Firstly the prediction made by Evans to demonstrate the matching heuristic was refuted by the experiment conducted by himself (1995). Secondly matching bias is not found in disjunctive reasoning tasks (Evans & Johnson-Laird 1969; Evans, & Newstead, 1980; Roberts, 2002). Thirdly, in Wason's selection task, the p and q card selection based on matching bias is not a primitive response, but younger subjects tend to show anti-matching bias rather than matching bias (Nakagaki, 1992). From these experimental results and the related evidence, it would be concluded that the matching heuristic cannot explain matching bias in conditional reasoning.

A dual process model for cultural differences in hindsight bias

Hiroshi Yama, Kobe College, JAPAN / Birkbeck College, UK; Ken I. Manktelow, University of Wolverhampton, UK; Hugo Mercier Institut Jean Nicod, FRANCE; Jean-Baptiste Van der Henst, Institut de Sciences Cognitives, FRANCE; Kyung Soo Do, Sung Kyun Kwan University, KOREA; Yayoi Kawasaki, Post Doctoral Fellow of the Japanese Society for Promoti ng Sciences, JAPAN; Kuniko Adachi, National Institute of Longevity Sciences, JAPAN.

AbstractChoi and Nisbett (2000) reported that Koreans showed stronger hi ndsight bias than Americans and explained the results using the distinct ion between analytic cognition (Westerners) and holistic cognition (East erners). The purpose of this study is to see whether hindsight bias is s tronger among Easterners than among Westerners using a probability judgm ent task, and to test the two-level accessibility to working models hypothesis that supposes implicit level and explicit level access to the working models that generate hindsight. According to this hypothesis, t he hindsight bias is caused by implicit level access to working models, and this access is more active among Easterners. French, British, Japane se, and Korean participants were asked to make probabilistic judgments i n a scenario including conditional probabilistic judgment (Experiment 1) and in a scenario of Good Samaritan (Experiment 2). In both Experiments 1 and 2, we presume that the implicit access is made just by being give n unexpected outcome information, and that the explicit access is made b y being asked to point out possible factors for the unexpected outcome. In the results, Easterners showed greater hindsight bias generally and i t was greater in the Good Samaritan scenario. We conclude that the reaso n why hindsight bias was less among Westerners is not only that they use d less implicit access to working models that generated hindsight, but a lso that they showed resistance to being affected by the unexpected outc ome information.

Hindsight components and causal reasoning

Hartmut Blank, University of Portsmouth
Steffen Nestler& Gernot von Collani;University of Leipzig

We introduce a recent re-conception of hindsight bias (Blank et al., 2008): Rather than being a unitary phenomenon, there exist empirically components of hindsight bias, foreseeability, inevitability and memory distortion. After presenting evidence supporting this idea, we focus on cognitive processes (in particular, causal reasoning) involved in the inevitability component. In particular, we propose that inevitability impressions originate from causal models, that making sense of events is often effortful and needs cognitive resources. We present experimental evidence (Nestler et al., in press) showing that events are perceived as less inevitable if people are under cognitive load (and therefore lack the resources to make sense of the events). Moreover, cognitive load is shown to interfere specifically with the evaluation of possible causal antecedents, not with their recall.

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6. Do not re-enter the building unless told it is safe to do so

If you discover a fire

1. Operate the nearest fire alarm (red "break-glass" boxes on walls)
2. The Duty Attendant at Malet Street will be automatically contacted in every case and will immediately call the Fire Brigade.
3. Do not try to fight a fire unless you have been trained to use fire extinguishers.
4. Leave the building by the nearest exit

Explore the College. Get to know all the fire exit routes available to you. In the event of a fire you may need to use more than one.

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