



RESEARCH IN BRIEF

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The price of language

Babies notice concepts that adults learn to ignore. **TOM STAFFORD** reports.

LANGUAGE affects how we look at the world, even to the extent of making us forget distinctions we used to make as infants before we learnt to talk.

Newborns can distinguish the different sounds used in all the world's languages. This sensitivity fades as a single language is learnt, until as adults our hearing is specialised for the sounds used in that native tongue. (This is one of the reasons why it is so difficult for adults to learn the pronunciation of foreign languages.)

Susan Hesos of Vanderbilt University and Elizabeth Spelke of Harvard have demonstrated that a similar process occurs for at least one conceptual distinction – between 'tight-fitting' and 'loose-fitting'.

Although English-speaking adults can recognise this distinction, it doesn't seem to come to us as naturally as it does to babies, or to speakers of Korean. The English

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language focuses instead on the difference between 'on' and 'in' (the coffee is *in* the cup, the cup is *on* the table). Korean recognises loose fit vs. tight fit instead (a cap on a pen is a *tight fit*, a pen on a table is a *loose fit*, for example).

Hesos and Spelke used a visual preference procedure to assess how babies regard the world. We know that babies spend more time looking at novel things, and this can be used to discern how they categorise the world. Does a change across

'tight' and 'loose' create as much interest as a change across 'on' and 'in'?

Participants in the experiments were habituated to cylinders being put together in tight/loose relationships and on/in relationships. Pre-linguistic infants and adult Korean speakers took notice of a change between tight- and loose-fitting, but adult English speakers didn't.

'Adults ignore tight fit versus loose fit and pay attention to in versus on,' the authors said. 'Adults were glossing over the distinction that the babies were actually detecting.'

As well as providing evidence for the moulding of thought by language, the study shows that conceptual distinctions can precede language.

Hesos, S.J. & Spelke, E.S. (2004). Conceptual precursors to language. *Nature*, 430(6998), 453–456.

DOMINATING VOICES

When voice hearers experience distress. **SHARON MCEWEN**

RESearch suggests that the relationship voice hearers have with the voice they hear reflects aspects of their normal interpersonal relationships. So are the reactions also similar – are distressing emotional reactions to the predominant voice associated with 'negative' styles of relating between the voice hearer and the voice?

Through community mental health teams and hospital-based multidisciplinary teams, Sam Vaughan (Bedford Hospital) and David Fowler (University of East Anglia) recruited 30 people who had heard voices for at least six months, regardless of diagnosis. Questionnaires asked each individual about their most prominently heard voice, the level of distress it caused, and how they perceived their relationship with it. A measure of depression was included to analyse its influence on the relationship.

The main predictors of distress were voices relating in a dominating and insulting manner, and the individual reacting with suspicion and lack of communication with voice. Hence, distress was more strongly linked to the perceived dominant style of the voice than with beliefs about the voice's intentions (malevolent or benevolent). Contrary to expectations, relating to the voice from a more submissive position was associated with a *lower* level of distress. However, the authors warn that 'as with real relationships, the degree to which submissiveness is functional may depend on the effects such strategies have on wider self-esteem and the degree to which submissiveness requires either acceptance of abuse or colluding with demands to undertake aversive behaviour'.

The authors admit that further exploration of the reliability and validity

of the new relating scales used in this study is needed, hence all results should be treated with caution. They also suggest further study of those who hear more than one voice, and of changing relationships with voices over time.

Overall, the authors say that in cases where traditional coping strategies of thought-stopping and distraction techniques have been unsuccessful, 'the development of client awareness of the sorts of relationship that exists between themselves and the voice may be therapeutic in itself and provide distancing from the voice experience.'

Vaughan, S. & Fowler, D. (2004). The distress experienced by voice hearers is associated with the perceived relationship between the voice hearer and the voice. *British Journal of Clinical Psychology*, 43, 143–153.

■ Sharon McEwen is an assistant psychologist at the State Hospital, Carstairs.

Caught in a trap

Could the criminal mind be a suspicious mind? **LAURA BRAZIER**

THE ability to detect deception has generally been reported to be rather poor. Judgements can be impaired by a limited knowledge of the few objective cues to deception, with decisions based on subjective cues that people believe are associated with lying. Furthermore, a tendency for people to judge statements as truthful more often than deceptive – a truth bias – also hinders identifying deception (Levine *et al.*, 1999).

However, specialist groups such as secret service agents, FBI officers and clinical psychologists have been found to outperform lay people in identifying deception. Maria Hartwig and colleagues set out to explore the ability of another specialist group – criminals. The authors predicted that criminals would be better at detecting deception than lay people and that they would not exhibit the same truth bias.

A group of 52 criminals in a high-security prison were compared with 52 undergraduate students. The participants saw 20 videotaped witness statements and were asked to judge whether they were lying or telling the truth. Prior analysis of the statements revealed that there were clear non-verbal differences between the witnesses lying and telling the truth. In order to explore how decisions were made, a set of six verbal cues and four non-verbal cues were provided for participants to justify their decisions.

As predicted, the criminals were significantly better at detecting lies than the undergraduates and performed above chance levels. This level of accuracy is comparable to US secret service agents, FBI officers and clinical psychologists. The criminals were not so good at detecting truths; the criminals had a pronounced lie bias, perhaps reflecting a perception warped by the criminal environment – that deception is more common than truth.

The most frequent cue used by criminals to detect deception was whether a statement sounded plausible. Previous research has shown that plausibility is a reliable cue for detecting deception.

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UNSUCCESSFULLY HAPPY AT WORK

Whether or not someone enjoys their job depends largely on their personality. That's one implication of a study by Nikos Bozionelos (Sheffield University), who asked 308 office workers at three universities to complete a range of personality and career questionnaires.

Bozionelos used Catell's 16PF5 personality questionnaire (see Ourl.com/tE) to calculate people's scores on the 'Big Five' personality traits of neuroticism, extraversion, openness, agreeableness and conscientiousness.

People with more agreeable personalities, who are altruistic, friendly and sensitive to others' needs, tended to be happier with their jobs. However, people with agreeable or neurotic personalities also tended to have less actual job success, as judged by their lower job grades. 'Agreeable people tend to evaluate their careers positively despite relative lack of career success,' Bozionelos said, pointing to their altruism, self-sacrifice and modesty as characteristics that might hold them back.

The study also produced some strange associations. For example, people with conscientious personalities also tended to occupy lower job grades. Bozionelos said this result needed to be replicated but might be due to excess conscientiousness suppressing divergent thinking and creativity.

Bozionelos, N. (2004). The relationship between disposition and career success: A British study. *Journal of Occupational and Organizational Psychology*, 77, 403–420.

Weblinks: Journal: www.bpsjournals.co.uk/joop/
Take the five factor personality test: www.outofservice.com/bigfive/

Syllabus advice: Key study is McCrae, R.R. & Costa, P.T. (1989). More reasons to adopt the five-factor model. *American Psychologist*, 44, 451–452. [OCR]: A2 the specialist choices, psychology and organisations.

Undergraduates on the other hand used consistency most frequently, which has not been found to be a reliable cue.

These findings highlight the importance of distinguishing between reliable and stereotypical cues for detecting deception and imply that this awareness is included in training programmes. In addition, the authors argue that it is important for professional lie detectors to have extensive practical experience and feedback, which it is argued the criminals drew on to detect deception accurately. The authors suggest that these findings could indicate a 'default setting' of suspiciousness in criminals.

Hartwig, M., Granhag, P., Stromwall, L. & Andersson, L. (2004). Suspicious minds: Criminals' ability to detect deception. *Psychology, Crime and Law* 10(1), 83–95.

Reference

Levine, T.R., Park, H.S. & McCornack, S.A. (1999). Accuracy in detecting truths and lies: Documenting the 'veracity effect'. *Communication Monographs*, 66, 125–144.

■ *Laura Brazier is a research officer at the National Research and Development Centre for Adult Literacy and Numeracy, Institute of Education, London.*

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