

# My, how you've changed

We think we're more desirable in the present than in the past. **FIONA LYDDY**

**S**Ocial comparison can bolster self-esteem, when we view ourselves as better than our peers. Comparison with our past selves can serve a similar function; derogating the past self enables a relatively positive view of the present self. We are thus motivated to perceive an inferior past self in order to enhance our current self.

A recent series of studies by Anne Wilson and Michael Ross of the University of Waterloo, Canada, tested this theory across a series of studies in which participants evaluated self- and peer-attributes in the past and present.

University students first described how they saw themselves in the present and at 16 years of age; they then judged how favourable these statements were. Their present selves were rated more favourably.

Students and their parents then evaluated their present and past selves on a list of desirable and undesirable traits. Each group viewed their desirable traits as steadily improving with age, although parents rated their undesirable traits as being consistent over time. Both groups, however, rated themselves as better than their peers, at each timepoint.

In a longitudinal design for the third study, university students evaluated

themselves at the beginning of the academic year and then again two months later. The study found that former selves were depreciated, but remained superior to their peers.

Next, participants rated themselves and an acquaintance at the start of term and three months later. Participants reported more improvement in themselves, while ratings of acquaintances were consistent over timepoints, suggesting that the effect of present-self enhancement does not reflect a general belief that everyone improves over time.

Another perspective came from asking pairs of siblings to assess their own and their siblings' attributes in the present and during childhood. Participants viewed themselves as better than their siblings in the present but worse in the past, a greater change being reported for self than for siblings.

In the final study apparent temporal distance was manipulated by instructing participants to 'think of a point in the recent past, the beginning of term' or to 'think all the way back to the beginning of term'. When depicted as recent, the evaluations changed little; but when perceived as distant, participants reported improvement

from past to present on the attributes of importance to them. Again, the derogated past selves remained above average. The future may be bright but the past is rose-tinted.

Wilson, A. E., & Ross, M. (2001). From chump to champ: People's appraisals of their earlier and present selves. *Journal of Personality and Social Psychology*, 80, 572–584.

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## The secret language of twins

Twins' private language has links to learning difficulties. **FIONA LYDDY**

**L**ANGUAGE development in twins is, on average, delayed relative to singletons, a fact which has been attributed to the development of a 'secret language' within the twin pair. A recent study suggests that not all such communication is deviant, nor does it cause language impairment.

Karen Thorpe, Rosemary Greenwood, Areana Eivers and Michael Rutter (Institute of Child Health, Bristol, and the Social, Genetic and Developmental Psychiatry Research Centre, London) examined the prevalence and course of secret language in twins (76 pairs) and similar-age siblings (80 pairs). Speech that was intelligible only within the child pair was categorised as private language when used exclusively

within the pair, and as shared verbal understanding when its use was not necessarily exclusive. At 20 months and again at 36 months a series of systematic measures recorded aspects of language development, cognitive functioning, parental language, family interaction and home environment. Those reporting private language were followed up at age six years.

Overall, the transitory use of some forms of secret language was relatively common, temporary and benign. Shared understanding was reported in 38 per cent of children at 20 months, declining to under 11 per cent at 36 months. It was twice as common in twins and, while associated with a slight cognitive and language delay at age three years, had no long-term effects.

Private language was rarer, declining from 7 per cent at 20 months to under 4 per cent at 36 months. At 20 months private language was associated with a temporary deficit in language development. However, at age three it was discontinuous with the earlier form and almost exclusively a twin phenomenon. Moreover, its predominant use in a small subgroup of children was associated with persistent atypical language and social functioning.

Notably, the data suggest that private language emerges as a consequence rather than a cause of language impairment.

Thorpe, K., Greenwood, R., Eivers, A., & Rutter, M. (2001). Prevalence and developmental course of 'secret language'. *International Journal of Language & Communication Disorders*, 36, 43–62.

# E-male or female?

Electronic communication reveals your sex but doesn't seem to affect your writing style. **FIONA LYDDY and NEIL MARTIN**

**G**ENDER-preferential language styles are found in written and spoken communication, with women expressing more questions, compliments, apologies and intensive adverbs (e.g. 'most' or 'very'), and men more opinions, insults and adjectives.

Electronic discourse shares elements of spoken and written language and shows similar gender-preferential style differences, according to a recent study. Rob Thomson and Tamar Murachver at the University of Otago, New Zealand, examined the evidence for style differences in e-mail messages. In one experiment 35 undergraduate students sent at least six e-mail messages to assigned same-sex 'netpals' over a two-week period. The number of messages, words, and key linguistic features were counted and verified by independent raters. There was no difference in the number of messages sent or message length, and only small differences in the frequency of language variables were found between males and females. However, using a discriminant analysis, weighted combinations of features emerged that accurately predicted the gender of 91 per cent of the writers.

Messages demonstrating a gender-preferential style were selected and, in a further experiment, another group of participants rated the likelihood that the author was male or female. The female versions were indeed more likely to be rated as being written by a female. The messages were rewritten in a third experiment to conceal clues such as the topic of the message. Again participants correctly discriminated gender.

Overall, a strong effect of gender style emerged, despite the small differences in individual features. But the implications for those who adopt gender-neutral identities on the internet are unclear. The over-accommodation to gender stereotypes may be restricted to communication between same-sex dyads not instructed to conceal their identity, and may not be found in the more anonymous settings of internet discussion groups and chatrooms.

The same research group has also shown that the language used by your e-mail recipient can affect your reply. Participants were asked to correspond with netpals, confederates who used either (what



Evidence for style differences in e-mail messages between the sexes

the experimenters call) female or male language. They based the distinction between male and female styles on analysis of e-mail correspondence reported in their earlier study. Both men and women responded to the e-mails in sex-preferential style.

Although 'gender differences in language are a reality,' the authors suggest, 'this does not mean that gendered language is an inevitable, inherent feature of a person. Clearly, it is also a feature of the situation.'

While researchers have been revealing the sex-biased nature of our electronic discourse, others have been finding out how the use of such electronic media might affect the way in which we write. James Hartley, Michael Howe and Wilbert McKeachie from Keele, Exeter and Michigan Universities sought to find out whether writing style was affected by the transfer from pen to computer.

They sampled equivalent types of their own work from different writing periods over 30 years – when drafts were written longhand, written longhand and then wordprocessed and then directly wordprocessed. A readability software package was used to evaluate the style of the samples. Research to date has been mixed – some studies have judged handwritten reports and essays to be stylistically superior, whereas other studies have shown no effect.

Typically, the way in which the authors used technology changed across the 30 years – at the beginning, all three wrote drafts in longhand; now they wordprocess directly. However, there was little within-author difference in style between the samples. Sentence length and text difficulty was consistent across the thirty years.

Limiting the analysis to academic text invites a comparison with other types of writing – literary writing, sketch writing or journalism, for example. These studies might reveal developmental changes in style that are independent of method of writing.

Hartley, J., Howe, M., & McKeachie, W. (2001). Writing through time: Longitudinal studies of the effects of new technology on writing. *British Journal of Educational Technology*, 32, 141–151.

Thomson, R., & Murachver, T. (2001). Predicting gender from electronic discourse. *British Journal of Social Psychology*, 40, 193–208.

Thomson, R., Murachver, T., & Green, J. (2001). Where is the gender in gendered language? *Psychological Science*, 12, 171–175.

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Further submission details are on p.447.

# I'm not as think as you drunk I am

Verbal fluency, alcohol and the brain. **NEIL MARTIN**

**T**HE consumption of ethanol is known, apart from the obvious, to increase blood flow in the brain. Doses of between 0.7 and 1.5 grams of alcohol per kilogram of body weight can cause increases of between 12 and 16 per cent in regional blood flow. When people complete tasks that tap functional brain asymmetries, these asymmetries are reduced when alcohol has been consumed.

Performance on frontal-lobe tests is also significantly affected by alcohol intake: decreased glucose metabolism and poor task performance on frontal-lobe tests are correlated in chronic alcoholics. One specific aspect of frontal-lobe performance – verbal fluency – may be affected by

alcohol consumption. Peter Wendt and Jan Risberg from the University of Lund, Sweden hypothesised that brain regions implicated in this function may also respond differently when the participant is sober or inebriated.

They measured regional cerebral blood flow in 20 healthy Swedish young men who completed a verbal fluency task (naming as many words as possible beginning with a given letter) while sober or inebriated. There was a one-week interval between the two conditions. Participants were given 1 gram of vodka in orange per kilogram of body weight.

While verbal fluency was reduced when participants were inebriated, activation seen

in the fronto-temporal part of the left prefrontal cortex was similar in the sober and drunk condition. However, there was no activation in the anterior part of the frontal lobe, a region usually activated during short-term or working memory tasks. It seems as if keeping a letter in mind and searching the mental lexicon is affected by inebriation; the inebriation correlates with little activation in the part of the brain that is normally active during such a task.

Wendt, P. E., & Risberg, J. (2001). Ethanol reduces rCBF activation of left and dorsolateral prefrontal cortex during a verbal fluency task. *Brain and Language*, 77, 197–215.

## What undergraduates really feel about science teaching

Students expect better pedagogy. **NEIL MARTIN**

**T**HE US experience of undergraduate science retention is not a happy one. Studies show that almost half of the students who decide to specialise in a science major switch to a non-science major soon after enrolment. Introductory classes are famed for their 'weed-out' process. Why the severe drop-out?

One factor seems to be poor pedagogy. Students who change to non-science subjects specifically cite this as a factor for leaving. More depressingly for US science teachers, surveys have shown that over 74 per cent of the science undergraduates who stick with the subject complain about poor teaching.

To determine the specific aspects of teaching that students find attractive and

repellent, CarolAnne Kardash and Michael Wallace from the University of Missouri-Columbia administered an 80-item questionnaire to 922 undergraduates studying science and non-science subjects. The questionnaire tapped factors such as presentation of classroom information, active vs. passive learning, laboratory experiences, lecturers' interest in teaching, student interest in science, and so on. Undergraduates were sampled from a range of subjects but came from predominantly biology-related subjects.

Science majors were more likely than non-science majors to regard their classes as less teacher-directed, passive, and focused on memorising facts. The latter were more likely to rate their teachers as being

interested in their subject. Women were also more likely than men to find classes more memorisation-focused. Men were more likely to have more positive attitudes towards laboratory classes and were more likely to regard grades as being good indicators of quality, effort and learning.

'Changes in the content and learning goals for undergraduate science classes may be insufficient to change students' perceptions of science classes,' the authors argue. Instead, 'such changes must be accompanied by concomitant changes in ... pedagogical practices.'

Kardash, C. M., & Wallace, M. L. (2001). The perceptions of science classes survey: What undergraduate science reform efforts really need to address. *Journal of Educational Psychology*, 93, 199–210.