acteristics, was higher than that expected by chance. Distinguishing features that are present in newborns' faces allow adults to identify the babies' sex, but these cues are subtle and easily missed or inconsistent. Accuracy increases with exposure to newborns, as seen with the nurses in our study. Perhaps people who have more contact with babies are more able to see differences between babies. Preconceptions relating to hairiness may influence people's assumption of neonates' sex. Our sample size did not allow us to determine whether girls really are hairier than boys. It could be concluded that the major clue to a baby's sex is its hairiness; perhaps experienced observers subconsciously take note of hairiness and so are better at identifying sex. Overall,

the observers in our study could identify the babies' sex from their faces—but why couldn't the paediatricians get it right?

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 Porter RH, Cernoch JM, Balogh RD. Recognition of neonates by facial-visual characteristics. *Pediatrics* 1984;74:501-4.

Shapely centrefolds? Temporal change in body measures: trend analysis

Martin Voracek, Maryanne L Fisher

Body mass index (weight (kg)/(height (m)²) and waist-hip ratio in women are linked to fertility, endocrine status, risk of major diseases, and longevity.¹⁻³ Health related optimums for body mass index (20 or slightly lower²) and waist-hip ratio (0.7 or slightly lower³) are also maximally sexually attractive to men.¹⁻³ According to evolutionary research, these attractiveness optimums reflect evolved optimal design and thus should not be subject to temporal change.³

This assumption is not consonant with the decline in the optimally attractive body mass index that has occurred in the past few decades, as exemplified by fashion models depicted in the media. With increases in the incidence of eating disorders in the general population of women, this decline is a cause for concern. ^{4 5} In contrast, Singh has reported evidence for the temporal stability of the maximally attractive waist:hip ratio, on the basis of analysis of the waist:hip ratios of centrefold models in *Playboy*. ³ However, Singh based this conclusion, as is the case for other studies pertaining to body measurements of *Playboy* centrefolds, ⁴ on a partial sample.

Subjects, methods, and results

We looked at the trends in *Playboy* centrefold models' body measurements by analysing 577 consecutive monthly issues, from the magazine's inception in December 1953 to December 2001. We extracted centrefolds' anthropometric data: height, weight, and measurements for bust, waist, and hip (n=532-543, owing to missing data). We calculated composite measures from these data: body mass index, waist:hip ratio, waist:bust ratio, bust:hip ratio, and an androgyny index (suggested by a reviewer)—waist/((hip*bust)**0.5). We correlated individual measures with magazine issue number (1 to 577).

All measures except weight, which was nearly stable (r=0.02) and hence may indicate a stable attractiveness cue, showed significant temporal change (if not



Changing trends in body shape: Rubens's wife (1636-8); Marilyn Monroe (1952); Eva Herzigova (2001)

specified, P < 0.001). Whereas the increase in height (r=0.36) merely reflects the well known secular acceleration trend, and an increase in the age of models (r=0.22) was not relevant to this investigation, all other changes call for attention. Over time, bust size (r=-0.36) and hip size (r=-0.29) decreased, while waist size increased (r=0.27). Composite measures of body shape captured the same trends: body mass index (r=-0.46) and bust:hip ratio (r=-0.13; P=0.002) decreased, while waist:hip ratio (r=0.47), waist:bust ratio (r=0.48), and androgyny index (r=0.50) increased.

Comment

The data suggest notable temporal trends in measures of body shape in *Playboy* centrefold models (figure). The typical body mass index of *Playboy* centrefolds has further descended below corresponding population levels, whereas their typical waist:hip ratio now approaches population levels. In sum, centrefold

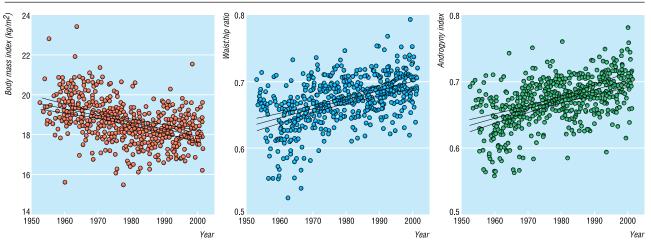
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Temporal change in body measures of Playboy centrefold models. Circles show individual data points (slight random jitter added to increase visibility). Linear regression (middle line) and 99% confidence intervals (upper and lower curves) are superimposed

models' shapely body characteristics have given way to more androgynous ones. These temporal trends are at odds with claims that centrefolds' body shapes are still more "hourglasses" than "stick insects" and that the maximally sexually attractive female waist:hip ratio is stable.3

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- Tovée MJ, Reinhardt S, Emery JL, Cornelissen PL. Optimum body-mass index and maximum sexual attractiveness. *Lancet* 1998;352:548.
 Manson JE, Willet WC, Stampfer MJ, Colditz GA, Hunter DJ, Hankinson SE, et al. Body weight and mortality among women. *N Engl J Med* 1995;333:677-85.
- Singh D. Adaptive significance of female physical attractiveness: role of waist-to-hip ratio. *J Pers Soc Psychol* 1993;65:293-307.
- Tovée MJ, Mason S, Emery JL, McClusky SE, Cohen-Tovée EM. Supermodels: stick insects or hourglasses? Lancet 1997;350:1474-5
- Rintala M, Mustajoki P. Could mannequins menstruate? BMJ

Slings and roundabouts



I had the misfortune of experiencing the disability caused by a fracture near the shoulder joint. Playing my favourite instrument, the clavichord, became impossible, as raising my hand to the keyboard caused severe pain-until I thought up a solution. I suspended a sling with an elasticated cord from a conveniently positioned hook in the ceiling. The sling was adjusted so as to precisely counterbalance the weight of the forearm on the affected side. It was so comfortable that playing the clavichord actually relieved the pain. If one of your patients with a fracture of the humeral greater tuberosity wishes to continue exploring Bach's "Goldberg Variations" on a clavichord, you know what to recommend.

George Debono retired physician, Malta

Pomegranate MRI



A 55 year old man presented with what seemed to be a straightforward case of carpal tunnel syndrome in 1973. His symptoms got worse over time, so the surgeons decided to explore his wrist. They found a 10 cm swelling of the median nerve and took a biopsy sample from it. The histology showed that the fibro-fatty tissue was unlikely to be a tumour. Five years later he underwent a magnetic resonance scan of his wrist. This showed a rare fibro-lipomatous hamartoma which is found almost exclusively in the median nerve. It has a characteristic "pomegranate" appearance on magnetic resonance imaging and is reported to enlarge after surgical intervention.

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