An earlier formulation of the genetic conflict hypothesis of genomic imprinting

To the Editor:

In *Mate Choice in Plants*, Mary Willson and Nancy Burley wrote, "the effects of a rare allele that confers increased resistance to abortion…differ depending on whether it is located in a maternal or paternal genome. Within the genome of a large-brooded female it would likely result in conflict between individual and gene selection rather than between parent and offspring, because if the allele spread, it would do so at the expense of the inclusive fitness of the brood as well as the reproductive success of the mother. Within the paternal genome such an allele would tend to increase the reproductive success of the father and the inclusive fitness of the father's 'brood'. This suggests then, that selection would tend to suppress the effects of such an allele in maternal gametes and in the maternal portion of early zygotes and enhance their effects in paternal gametes and in the paternal portion of zygotes. Thus sex-limited expression of the allele would tend to evolve"[1].

This passage contains essentially the same argument for the evolution of genomic imprinting as subsequently proposed by us[2]. In that paper, we cited *Mate Choice in Plants* in a different context. Thus, it is probable that at some time each of us had read the passage quoted above, although neither of us recalls doing so. To what extent this passage influenced our hypothesis is now impossible to determine, but we take this opportunity to draw attention to Willson and Burley's earlier insight.

David Haig[1] *& Mark Westoby*[2]

[1]*Department of Organismic and Evolutionary Biology, Harvard University, 26 Oxford Street, Cambridge, Massachusetts 02138, USA.*
[2]*Department of Biological Sciences, Macquarie University, Sydney, NSW 2109, Australia.*
e-mail: dhaig@oeb.harvard.edu

1. Willson, M.F. & Burley, N. *Mate Choice in Plants* 19 (Princeton Univ. Press, Princeton, New Jersey, 1983).
2. Haig, D. & Westoby, M. *Am. Nat.* **134**, 147–155 (1989).