Last but not least

'United' we stand

A little before Bill Clinton and Al Gore's re-election for a second term in office we had presented an illusion that used their visages (1966, "I think I know that face ..." *Nature* **384** 404) to make a simple point about face recognition. Titled "Democrat Coalition", the illusion showed a seemingly unremarkable picture of Clinton and Gore standing side by side. Interestingly, however, closer inspection revealed that Gore's internal facial features (eyes, nose, and mouth) had been digitally supplanted by Clinton's. The scientific point behind the image related to the nature of facial encoding used by the brain for identification of individuals. Unlike many computer vision systems and models of face processing that rely on fine details of the internal features and their precise spatial configuration, the encoding used by the human visual system appears to emphasize the whole head structure.



With the change of the administration in the White House, and the imminent publication of new editions of the books in which the illusion was reproduced, we have been urged by several colleagues to update the illusion. The new version ("Republican Coalition"?) is shown above (with color version on the web at http://perceptionweb.com/perc0102/sinha.html). Vice-president Dick Cheney's face has been given President Bush's internal features (and their original configuration in the President's face). Most naïve observers see this as a run-of-the-mill picture of the two men. Even upon being told of the embedded digital alteration, some have trouble convincing themselves that the two do indeed have identical eyes, noses, and mouths. This update to the Clinton—Gore illusion serves a variety of purposes. First, it shows that the Clinton—Gore illusion is not one-of-a-kind, but rather may demonstrate a more general principle of face encoding regarding the relative salience of internal features versus head shape and hair cues. Second, it suggests that the effect is quite robust, working even with pairs of people who appear to be very different. And, third, it shows that scientific journals are bi-partisan, devoting equal real-estate on their pages to democrats and republicans alike.

Pawan Sinha, Tomaso Poggio

E25-229, Department of Brain and Cognitive Sciences, Massachusetts Institute of Technology, Cambridge, MA 02142, USA; e-mail: sinha@ai.mit.edu