Piecing together the history of our knowledge of chimpanzee tool use

Sir — Whiten and McGrew reported in Correspondence[1] a fascinating Liberian postage stamp from 1906, suggesting that its image might be the first documentation of digging for termites by a chimpanzee. They identified the stamp as printed in London, but did not know the basis on which the image was composed.

I have now solved the mystery. By chance I discovered the original drawing (see figure, right) that must have served as model for the Liberian stamp (figure, left), in a popular German book of the time[2]. The artist is Gustav Mützel (1839–1893), whose brilliant illustrations of mammals and birds are well known through works such as those of the zoologist Alfred Edmund Brehm and his father, the ornithologist Christian Ludwig Brehm. Mützel signed the chimpanzee picture, adding the note "*n. d. Leben*" to show that his drawing was from his own observation of a living ape's behaviour, not from a pelt, photograph or other illustration.

Whiten and McGrew are correct to praise the accuracy of the drawing, which is even visible on the stamp. But it is not of a wild ape. The figure shows the female chimpanzee Mafuka from Gabon, who lived in the early 1870s in Dresden zoo where Mützel drew her[2]. Mafuka and other zoo apes learnt to use tools without any instruction: for example, drinking carefully out of a glass or a cup by imitating their human companions. These observations were among the reasons for establishing an ape research station on Tenerife, where Wolfgang Köhler conducted his famous studies on the intelligence of anthropoids[3]. In Mützel's picture the ape is probably using a stick to explore a knot-hole in the trunk of a tree. But the natural-looking environment is added from the illustrator's imagination. There is no termite mound in the picture, so Jane Goodall remains the first person to document wild chimpanzees 'fishing' with tools for termites[4].

This outcome of the mystery of the stamp seems at first sight to be somewhat disappointing. Nevertheless, the story tells us something, not about chimpanzees, but about the breadth of human culture and global information flow. A nineteenth-century German artist portrayed a young ape in Germany and added attributes of the ape's homeland to the scene. A British philatelic illustrator liked this African motif and transposed the scene from the German drawing to a Liberian stamp. Looking at the stamp nearly one hundred years later, two primatologists thought that it might be a record of tool use by chimpanzees in Liberia.

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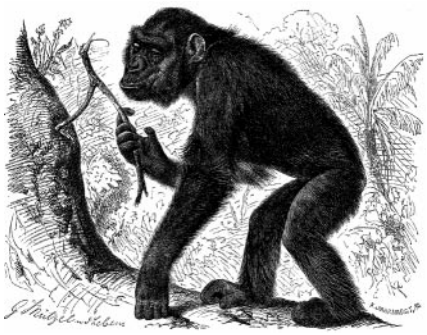
1. Whiten, A. & McGrew, W. C. *Nature* **409,** 12 (2001).
2. Brehm, A. E. *Brehms Thierleben: Erster Band* (2nd edn), (Bibiliographisches Institut, Leipzig, 1876).
3. Köhler, W. *Intelligenzprüfungen an Anthropoiden I* (Königliche Akademie der Wissenschaften, Berlin, 1917).
4. Goodall, J. *Nature* **201,** 1264–1266 (1964).



Tool order: did the stamp-illustrator know more about chimpanzees than the original artist?

Whiten and McGrew reply — We thank Kattmann for finding the elusive chimpanzee image used in designing the 1906 stamp that so intrigued us. This is a welcome demonstration of the power of international science, through the medium of *Nature*, to recover such an obscure item.

Kattmann suspects that the provenance of the 1887 image means we misinterpreted what the 1906 stamp itself portrays. Not necessarily. We recognized at the outset that the stamp design may have drawn on multiple sources of information, of which the image of the chimpanzee itself is only part. Indeed, closer inspection suggests that the 1906 stamp-designer knew more than the 1887 artist: the twig is shortened and no longer touches any object; the tree-hole and roots are replaced by what seems to be a mound; and the surface texture of the latter is different. The specificity of these changes suggests that the stamp design incorporates early knowledge of tool use in acquiring termites.

This would not have been the earliest report of tool use by chimpanzees, which we believe to be that concerning use of stone hammers to crack nuts in West Africa[1]. Our suggestion was rather that here we might be seeing the first realistic *depiction* of tool use.

Of course, a single stamp illustration cannot prove this point. We believe, rather, that the close match with what we now know of termite-digging may not be coincidental. Although Kattmann's rediscovery of the 1887 image certainly clears up some of the mystery, we remain keen to receive any information that tracks down the stamp's designer and the rationale for all he or she drew, for this might yet lead us to fuller and more informative early data on chimpanzee behaviour.

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1. Savage, T. S. & Wyman, J. *Boston Journal of Natural History* **4,** 362–386 (1844).

Three-person rule was not set by Nobel himself

Sir — The Correspondences "Protest at Nobel omission of Moncada" (*Nature* **396,** 614; 1998) were a welcome contribution to the debate about criteria for selection of Nobel laureates. The editor's note on the same page read: "The most troublesome aspect of the Nobel process is the apparently unchangeable fact that the prizes are distributed according to the terms of Nobel's will, which states that the number of recipients in each category shall be limited to three."

This clarification is not strictly correct. There is no reference to the 'three-person rule' in Nobel's will. This principle was established in paragraphs1b and 4 of the statutes of the Nobel Foundation that interpret and elucidate the will (see the Nobel Foundation website at www.nobel.se). "There shall be no departure from the following main principles … In no case may a prize be divided between more than three persons." The provisions in these paragraphs were the subject of lengthy negotiations from 1896 to 1900 between Nobel's executors, representatives of his (largely disinherited) heirs, awarders of the prize and the Swedish government.

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