2018 Engelsk (teknisk tekst)

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| Et oversettelsesvalg henger alltid tett sammen med vurderinger knyttet til det konkrete oversettelsesoppdraget (*translation brief*). Derfor følger her beskrivelsen av et tenkt oppdrag for oversettelsen av nedenstående tekst, tatt fra [**http://rspb.royalsocietypublishing.org/content/285/1873/20172735**](http://rspb.royalsocietypublishing.org/content/285/1873/20172735)**.** *Translation brief*: Teksten skal oversettes i forbindelse med opplæring av personell som i sitt arbeid har med blinde og svaksynte å gjøre. |

**Human echolocators adjust loudness and number of clicks for detection of reflectors at various azimuth angles**

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[…]

**1. Introduction**

Echolocation is the ability to use reflected sound to infer spatial information about the environment. Just as in certain species of bats or marine mammals, people can echolocate by making their own sound emissions. In fact, some people who are blind have trained themselves to use mouth clicks to echolocate. The beam pattern of mouth clicks that blind echolocators make exhibits a gradual 5 dB drop in intensity as function of angle from straight ahead to 90° to the side, but click energy is more heavily attenuated at further angles, and in particular at 135° sound energy drops by approximately 12 dB and at 180° (right behind the echolocator) by approximately 20 dB.

Detection of objects in echolocation depends on the echo-acoustic reflections they provide, and in bats it has been shown that echolocation behaviour is linked to the beam pattern of their emissions. Since the beam pattern of human mouth clicks shows that click sound levels decrease at further azimuth angles it follows that the same reflector will be less effectively ensonified at further angles when compared to straight ahead. Therefore, based on the beam pattern of human mouth clicks we would predict that echolocation behaviour for object detection (i.e. to determine if an object is present or absent) should also change as a function of azimuth angle.

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We found that echolocators detected reflectors placed within the frontal hemisphere with 100% accuracy, but performance dropped to approximately 80% when the reflector was placed at 135° (i.e. somewhat behind) and to chance levels (50%) when placed right behind the echolocators (180°). Furthermore, echolocators increased loudness of clicks and also made more clicks for reflectors at angles 135°–180° when compared to reflectors at 0°–90°. There were no changes in spectral content, duration or inter-click intervals (ICIs).