**Nestling weights and colour measurements for the three begging-related traits before and after the treatment with cyproheptadine.**

Experimental treatment consisted of the oral administration (with a plastic 1ml syringe) every two days of 0.1mg of cyproheptadine hydrochloride diluted with 0.25ml of mineral water (i.e. 0.05mg/day). Control nestlings were administered with 0.25ml of mineral water. First doses was when nestlings were 2–4 days old, afterwards nestlings received the treatment on five alternate days i.e. until they were 10–12 days old.

Spectral reflectance (300nm to 700nm) of three begging-related traits of magpie nestlings: mouth (gape or palate), rictal flange and body skin at the beginning and at the end of the treatment with cyproheptadine. Values are means obtained from three replicates and corrected by a triangular smoothing (i.e. a floating mean with weights within a distance of 10nm).

Discriminability of each begging-related trait (mouth, rictal flange and body skin) was calculated from spectral reflectance and relative to the nest background, taking into account magpie vision and the ambient light (i.e. irradiance) in the nests. It was calculated by using the colour opponency model for the tetrachromatic visual system of birds in its log form as implemented in AVICOL v5 software (Gomez 2006). This model calculates both chromatic and achromatic (luminance) contrasts expressed in *jnd* (just noticeable differences). We used the spectral sensitivity data from the peafowl (*Pavo cristatus*) as representative of the violet-sensitive system with the proportions for cone photoreceptors of 1:1.9:2.2:2.1 (VS : Short-Wavelength-Sensitive (SWS) : Medium-Wavelenght- Sensitive (MWS) : Long-Wavelength-Sensitive (LWS). We assumed that the signalling noise by each cone was independent of light intensity.

Colour components of the begging-related traits were also explored for the wavelength regions previously associated with variation in colouration of these nestling traits, i.e. 550–625nm (yellow) for carotenoid-based colourations, and 300–400nm (UV) for carotenoid-based and structural colourations. For these two regions, we calculated the mean brightness (Yellow–brightness, *R*550–625, UV–brightness, *R300–400*) and the chroma (Yellow–chroma, *R*550–625/*R*300–700, UV–chroma, *R*300–400/*R300–700*).

Random variation due to differences between nests was removed from body mass and colour measurements by equalizing within-nests mean values to zero, while maintaining original within-nest variance (i.e. residuals).