English Channel, in particular, the cod (*Gadus morhua*), ling (*Molva molva*) and to a lesser extent the herring. Should similar changes have occurred within the areas adjacent to the Bristol Channel they may well have produced conditions more favourable to the growth of the river lamprey. This seems to conflict with conclusions reached in a recent survey of coastal sport fishing in Britain[8], which suggested that the Bristol Channel area and its approaches had suffered a greater decline in the variety of fish than most other coastal waters. The explanation may be that the adverse effects of pollution are more apparent in the immediate coastal zone (where angling is generally carried out), rather than further offshore where the lamprey is believed to feed.

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Comment on "Visual System's View of Acoustic Space"

MORRELL[1] has presented "evidence of a rigorous spatial specificity in the acoustical projection to visual neurones". He observed that "along the horizontal meridian, the acoustical receptive fields were arranged in as orderly and systematic a way as the receptive fields for vision". The acoustical receptive fields were mapped onto visual receptive fields "having the same horizontal boundaries as the corresponding visual receptive field(s)" (Fig. 4, ref. 1). The superposition of the visual and auditory receptive fields is difficult to understand if one takes into account that the eyes move within their orbits. What happens to this superposition if, for instance, the eyes are turned 10° to the left side whereas the head remains in its original position? Three different results are conceivable: (1) The visual receptive field is shifted 10° to the left and thus keeps its position with reference to retinal coordinates. The auditory receptive field remains at its original position. In this situation there would be a dissociation between the position of the visual and the auditory receptive fields. (2) Both the visual and the auditory receptive fields are shifted 10° to the left, that is, the visual system would "control" the position of the receptive fields of the auditory system. (3) Both the visual and the auditory receptive fields remain at their original position, that is, the position of the visual receptive fields is remapped in order to coincide with the position of the auditory receptive fields, and thus with head coordinates. The outcome of an experiment investigating these possibilities cannot be anticipated, and the results might differ between an anaesthetized and an unanaesthetized preparation. It seems, therefore, that the data do not yet establish clearly that there is a "rigorous spatial specificity in the acoustical projection to visual neurones".

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1 Morrell, F., *Nature*, **238**, 44 (1972).

Reply

COMMENTING on my communication "Visual System's View of Acoustic Space"[1], Pöppel has made two observations. The first argues that I have not demonstrated a "rigorous spatial specificity in the acoustical projection to visual neurones" as that statement does not take into account what may happen when the visual axis is displaced from the auditory. The second comment suggests three different findings which such displacement might yield. Pöppel admits that there is little basis for prediction among these possibilities and that the result might differ depending on whether or not the animal was anaesthetized.

The questions are good. The answers depend on further experimentation. My conclusion was based on findings in a particular and well defined experimental situation; one in which the acoustical and visual axes were aligned. Given those restrictions, I feel the conclusions to be warranted. I do not extend them to all and every circumstance. Given the experimental situation as defined, the data seem to have an extraordinary regularity—one which is in every way as regular as the receptive field properties for visual stimuli.

Experiments to answer the questions posed by Pöppel are not yet complete. Preliminary findings indicate, however, that shifting the acoustical axis, for instance, by closing one ear, while maintaining fixed retinal coordinates results in a shift of the acoustical receptive field but not the visual. Thus, the third possibility mentioned by Pöppel does not obtain; the acoustical system does not "control" or remap the visual receptive field. Nor does the reverse occur. Fixation of retinal coordinates does not impose similar fixation of acoustical fields. Dissociation, that is, the first of Pöppel's alternatives, seems to hold in the paralysed, unanaesthetized cat.

The implication of this finding with regard to the behaving, unrestrained animal remains to be determined.

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Attached *Sargassum* Found in Britain

ON February 17, 1973, some thirty scattered plants of the brown algal genus *Sargassum* were found attached on a sheltered shore in Hampshire. This is the only record for attached plants of a species of *Sargassum* in Britain. The specimens were well grown, attaining a length of up to 1 m (Fig. 1), and showed the characteristic morphology of this genus with monopodial branching, air-bladders and leafy laterals. We are confident that these plants constitute a recent introduction as the area has been under surveillance since 1967, being one of the localities for a possibly-introduced *Grateloupia* sp. (red alga)[1].