
Ritualization of Courtship Postures of *Larus ridibundus* L

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I. FILMS AND SOUND RECORDINGS

Ritualization of courtship postures of *Larus ridibundus* L.

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Three short films of displaying Black-headed Gulls demonstrated the similarity between, on the one hand, the displays shown by males and females when meeting for the purpose of pair formation and, on the other, the agonistic displays shown by mutually hostile males. Studies by Moynihan (1955), Manley (unpublished) and Tinbergen (1959), summarized in Tinbergen (1965), lead to the following interpretation.

The agonistic displays between males have the effect of spacing-out the territories and thus the nests. This is of vital importance to the survival of the broods. Pair formation is initiated by females joining males on their territories. The displays shown on this occasion, though similar to the hostile displays shown in male–male encounters, differ from these in some respects. For instance, both partners assume a head-up posture, and usually take up a parallel, sideways orientation. In male–male encounters, these aspects are controlled by, and vary with, the proportional degree of arousal of the tendency to attack and the tendency to flee. The more a male is intimidated in an encounter with another male, the more its head is pointed upward, and the more it inclines to sideways orientation. These signs of fear are understood by the opponent as indicating a low probability of attack.

The fact that both partners of a prospective pair assume postures similar to the agonistic or threat postures indicates, with other evidence, that the partners are not merely sexually attracted to each other, but also arouse aggression and fear in each other; each is in a state of motivational conflict. However, the pair formation displays have developed a ‘typical intensity’ (Morris); the head is invariably pointed up and the orientation is parallel, and this, in this situation is independent of the proportional arousal of attack and fear—exceptionally aggressive males adopt the same pair formation postures as exceptionally timid females.

This must mean that, while the situation ‘female intruding into territory’ forces both birds to adopt agonistic postures, there is considerable pressure towards showing, in pair formation, the least frightening variations of these postures. Colloquially: postures meaning ‘I am not likely to attack’ interfere least with the need for male and female to approach each other.

In many vertebrates that space out through territoriality there is a similar relationship between agonistic and pair formation postures: similarity of postures in the two situations, yet independent ritualization of mating ceremonies in the direction of non-hostile and even friendly forms of originally hostile displays.

REFERENCE (Tinbergen)

- Tinbergen, N. 1965 Recent studies of evolution of sexual behaviour. In Beach, F. A. (ed.), *Sex and behavior*, pp. 1–34. New York–London–Sydney: Wiley.