

FACTORS AFFECTING SOCIAL BEHAVIOUR.

For maintaining the social life the bees are governed by certain basic factors such as -

(i) **CHEMICAL STIMULATION** — With the purpose to hold all the members of a colony together there must be a communication source in case of bees and ants there is evidence of mutual chemical stimulation. It plays a dominant role in not allowing dispersal and solitariness among the members.

The larvae are fed by workers continuously and ceaselessly until they pupate. Except to this when the workers are free from feeding the larvae they engage themselves in licking the larva. During these two processes of feeding and licking, both workers and larvae obtain some attractive chemical substance produced by each of them and this chemical substance

of attraction and finally social habit among the members of the colony develop.

(ii) ODOURS AS SOURCE OF STIMULATION —

The bees coming from other colony are identified by their specific smell. Similarly the death of the queen in a colony is known to all the members within an hour and they prepare for rearing a new queen.

(iii) DANCE AS SOURCE OF COMMUNICATION —

The classical studies of Karl Van Frisch about the dances performed by bees give an interesting information.

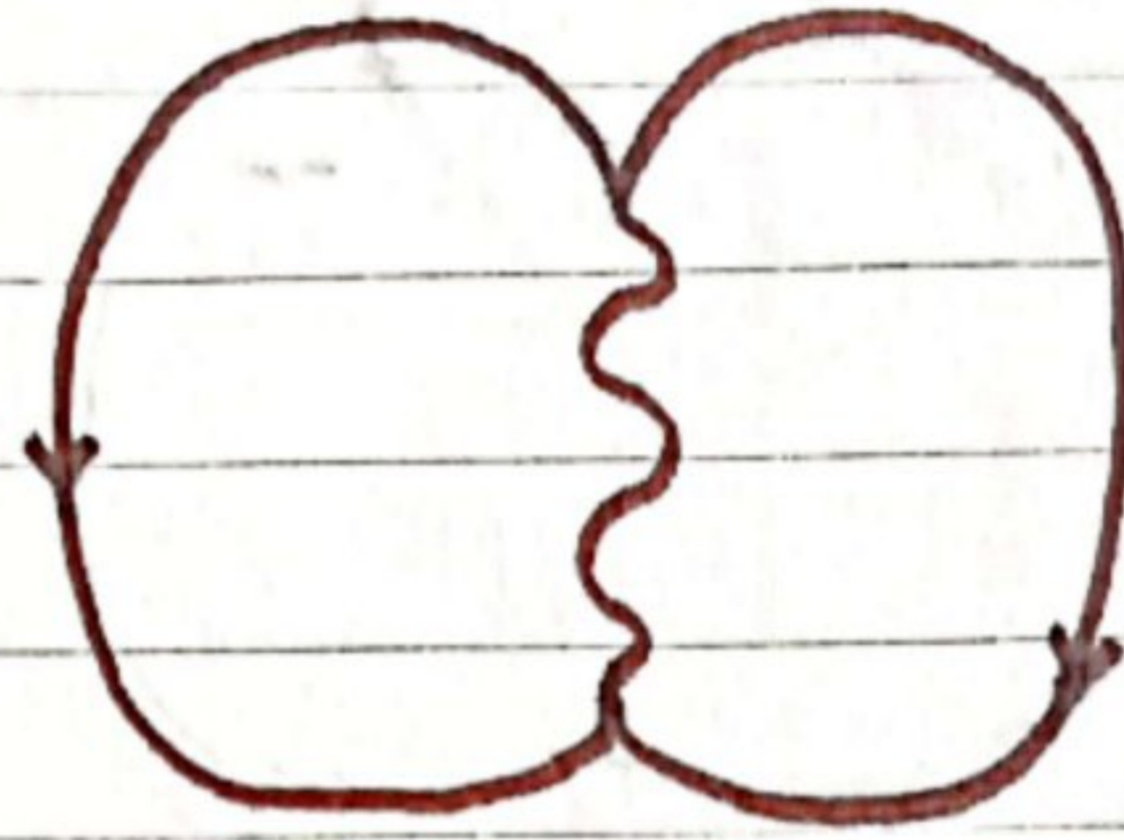
The dance performed by bee around their hive is of two types — round dance and waggle dance.

According to Frisch round dance only tells about the presence of food

within the 100 metre area of the hive, and waggles dance tells about the exact position within the area of 100 metres.

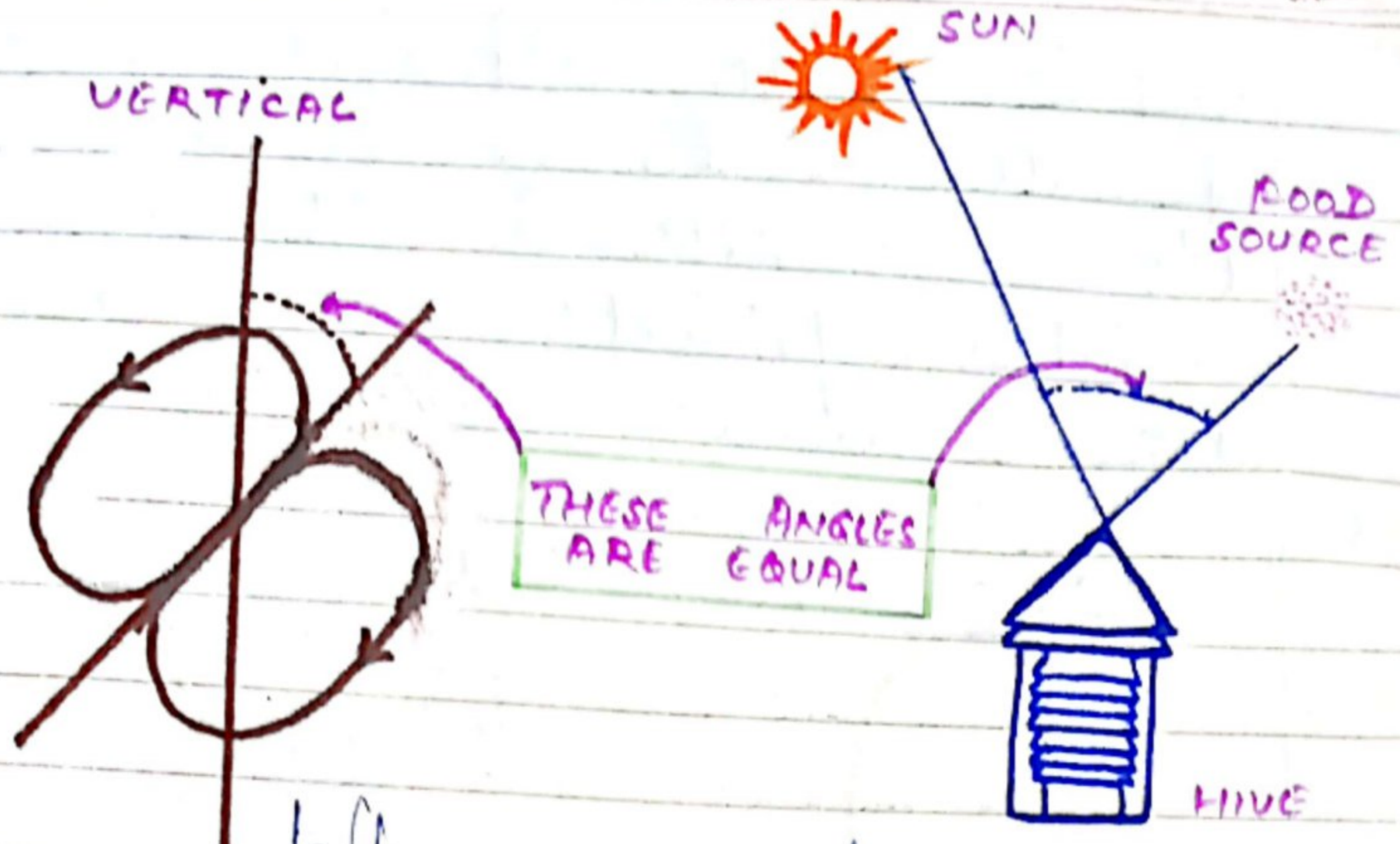


ROUND DANCE



WAGGLE DANCE

Van. Frisch claims that direction of the food source is indicated by the orientation of waggles dance generally returning forager performs its dance on a vertical wall in the hive. It is said that the angle between the vertical and the cross piece of the dance is equal to the angle between a line drawn from the hive to the sun and a line drawn from hive to the food source.



When a bee is doing its waggle dance other bees cluster round in an excited manner touching it with their antennae and following its movement in a crude kind of way and then they fly to food source.

(iv) SOUND AS SOURCE OF COMMUNICATION — Ann Werner claims

that during the period of dance a peculiar and specific sound is produced and that is related to the position of food source. It does not mean that dance is not a source of communication.