Honey-bees' **Mental Number Line** looks like ours.

Graphics by
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Human organize numbers, on a Mental Number Line, increasingly oriented from **LEFT** to **RIGHT**:

1 2 3 4 5 6 7 8 9 10

Do insects' microbrains organize number similarly?

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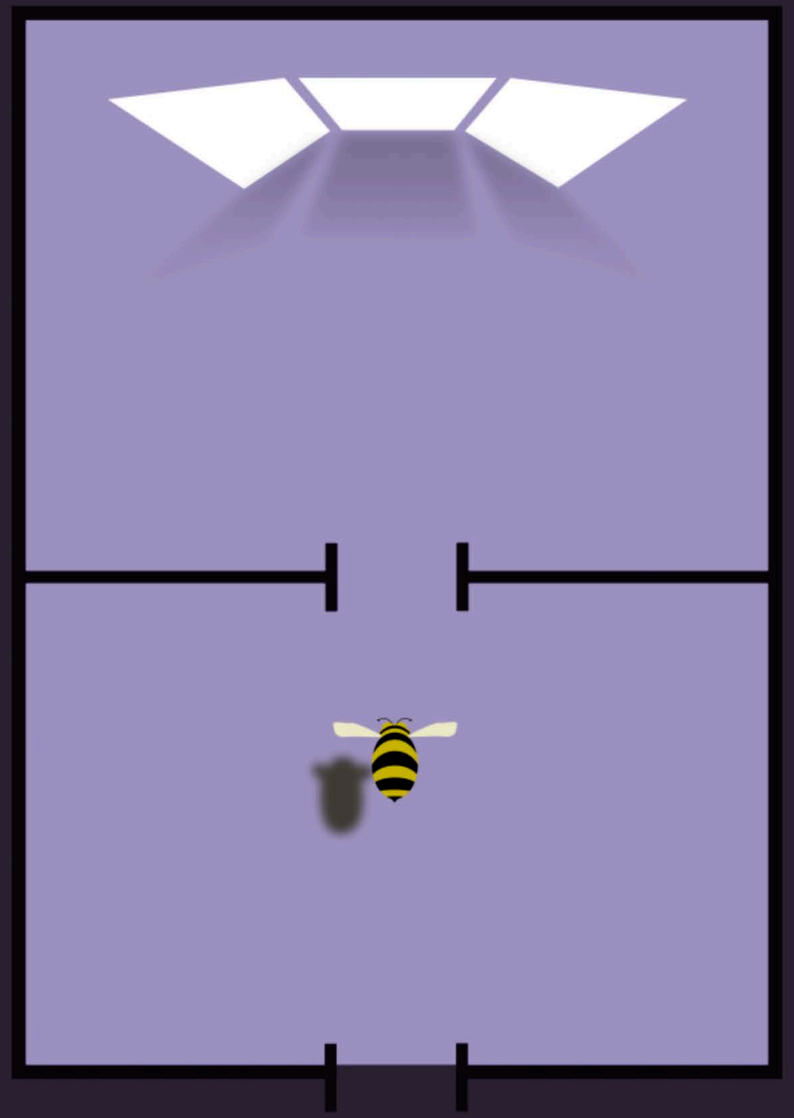

Honey-bees learn to find a sucrose reward near a card...

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...depicting **3 SHAPES.**

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At test, bees face novel numbers. When scientists insert two identical cards depincting **1 SHAPE**, but no sucrose reward, the bees mostly approach the **LEFT** card.

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Left side choice prevails
also when the size of the shapes
differs.

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Facing 2 cards, both depicting **5 SHAPES**, the bees go for the card on the **RIGHT**.

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So, it seems that the bees associates a **small number** (1) with the **LEFT** and a **large number** (5) with the **RIGHT**.

Ok, let’s make sure this choices actually depend on quantities rather than other occurrencies.

New bees that are trained on **1**,
at **3 vs 3** tests, choose the **RIGHT** card.

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Other bees that are trained on **5**,
at **3 vs 3** tests, choose the **LEFT** card.

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In short, training number becomes an anchor magnitude onto with other numbers are compared with.

3 is:

- Larger then 1, thus on its right
- Smaller than 5, thus on its left

So, a spatial numerical association, that nearly resembles the human **Mental Number Line**, exists in an insect.

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