Almost all organisms must make decisions of some kind, and making decisions effectively is crucial for them. I will present a model of collective decision-making based on empirical observations of a novel cross-inhibitory behaviour in house-hunting honeybee swarms. The pattern of interactions observed in collectively-deciding honeybees gives rise to a number of important value-sensitive decision-making characteristics. The model is able to achieve stable deadlock for poor but equal alternatives, but spontaneously choose between good alternatives. This enables sophisticated 'wait and see' decision-making. The model's sensitivity to value is similar to Weber's law of just-noticeable-difference from psychology. When differences are large enough to be noticeable, the model exhibits speed-accuracy trade-offs in decision-making. Given the simplicity of the model, the importance of value-sensitivity, and the similar patterns of interaction seen in other decision-making systems, I will ask whether genetic switches and neural circuits may exist that implement the same basic decision mechanism.