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Estimating Average Body Size of Sets of Bodies

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Abstract

In two behavioral experiments, we demonstrated that human observers can extract average body size from a group of individuals. In Experiment 1, we asked 38 participants to estimate the average body size from a group of 5, 10 or 15 bodies that were presented in various angles of view (Profile, Three-Quarter, Frontal, and Mixed). Participants were able to extract the average body size, but they systematically overestimated thinner body groups, and underestimated larger body groups. Biases were generally reduced for smaller sets sizes and when bodies were shown in profile view, but the trend was reversed for sets with larger bodies. In Experiment 2, we tested 37 participants and showed that the accuracy of their estimates was modulated by presentation time: Accuracy was poorest when groups were presented for 1s, but significantly improved for 3s and 5s presentations. Implications of these finding are discussed.