Attention allocation and learning in hierarchical organizations: experiments and models

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Abstract

Attention is a scarce resource. Since Simon (1947) it has been claimed that a fundamental function of hierarchical organization is to solve the problem of attention allocation in coordinating human activities.

We investigate through laboratory experiments and a computational model how attention allocation affects performance dynamics in simple hierarchical dyads, where a Principal can direct the Agent's attention to different task features. We observe a large heterogeneity in the adaptive performance of the experimental hierarchical dyads. Data suggest that the Principal's attention management policy is the fundamental determinant of performance differentials. Our hierarchical learning model closely replicates the observed average performance dynamics as well as the observed heterogeneity in performance. The model suggests that the observed difference in performance of different pairs can be determined to a large extent by path-dependence in the learning process rather than by differences in individual skills.

Speaker Profile

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