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Anastasia Bizyaeva* (bizyaeva@princeton.edu), **Sebastian Musslick** and **Naomi Ehrich Leonard**. *Normative and evolutionary perspectives on individual differences in cognitive flexibility*. Preliminary report.

Humans are often faced with antagonistic demands, such as maintaining focus on a single task (e.g. do taxes) while also being able to quickly switch to another task (e.g. respond to a fire alarm). In previous work, we studied how individuals balance the tradeoff between cognitive stability (the ability to focus on a task) and cognitive flexibility (the ability to switch between tasks) in a given environment. Leveraging dynamical systems theory, we showed that it is optimal for a single individual to sacrifice cognitive stability in the service of cognitive flexibility, especially if the environment requires frequent switches between tasks. Here, we explore the optimal balance between cognitive stability and cognitive flexibility at the group level. We investigate how heterogeneity in cognitive flexibility among individuals contributes to performance of the individuals in a collaborative task-switching environment. We further study how heterogeneity in cognitive flexibility emerges in a population with evolutionary interactions between individual traits. (Received March 02, 2020)