

Indecisiveness is defined as the inability to make decisions quickly and confidently. On the behavioral level indecisiveness manifests itself in a strictly limited way: through the prolonged latency of decision. However, indecisive behaviors are certainly controlled by multiple mechanisms. Let us imagine two women: Anna and Alice. Both of them have to decide how to invest their money in the stock market. Anna thinks for a long time, but feels anxious about different options, she changes her mind a few times before making a final decision in doubts and hesitation. Alice also thinks for a long time, but in contrast she does not feel emotional distress, she slowly and carefully considers the benefit versus risk ratio, and finally makes up her mind. From the example above it follows that a given indecisive behavior may be exhibited for significantly different reasons. Such a behavior is multi-determined, but this fact was frequently neglected by researchers. Moreover, hitherto surprisingly little attention has been paid to the influence of indecisiveness on cognitive control. The aim of the proposed project is to fill these gaps by recognizing the multifaceted nature of indecisiveness and investigating the links between individual differences in indecisiveness and selected aspects of cognitive functioning.

In our research we will unravel the multifaceted nature of indecisiveness by taking into account behavioral and affective parameters reflecting the difficulty of decision making and examine whether and how different types of indecisiveness are associated with cognitive control processes, such as response inhibition, error detection, feedback processing, and their neural correlates. We will also determine whether the associations between various types of indecisiveness and cognitive control are differently modulated by emotional contexts. We will also assess whether various types of indecisiveness may be related to different dynamics of motor response selection and execution. Finally, we will check whether indecisiveness can be predicted from the brain activity.

The results of the proposed project will set the stage for future investigations refining the multifaceted nature of indecisiveness in healthy, as well as clinical samples, investigating the influences of genetic variation and environmental factors, and contextualizing these processes in relation to other traits. The project will also serve as a primer to inform theories of decision making about the associations between various types of indecisiveness and crucial cognitive control processes. The results will also provide the data necessary for further work towards an integrated model of decision-making and cognitive control. Thus, it will likely constitute a highly significant contribution to cognitive psychology and cognitive neuroscience.