Evaluative conditioning (EC) is an effective mechanism of acquisition and modification of preferences and attitudes. It refers to a change in liking of an initially neutral stimulus through repeated pairings with a valenced stimulus. For example, we might start preferring broccoli because it was consistently paired with our most favourite topping. Shaping and modification of attitudes are in the centre of psychology interests because preferences play an important role in predicting many types of behaviours. The proposed project will lead to our deeper understanding of how EC works and what are its basic psychological mechanisms, which in turn might contribute to more efficient practices of attitude change in clinical, persuasion, and advertising settings.

For almost 30 years there has been a debate what mechanisms are responsible for EC effects. On one hand, a probable explanation involves associations (connections) between stimuli. According to this theory, we start liking/disliking particular objects because during contact they associatively activate representations of liked/disliked objects that were paired before. Other researchers point to propositions (information about relation between stimuli) as crucial in forming and changing attitudes. For example, repeated contact with a shampoo brand that is presented by a hairy top soccer player might give rise to a propositional statement „This person is using the XXX". Consequently, we might revoke this statement noticing this shampoo on a shelf and deducing its positive evaluation. Therefore, although it is known that the effect occurs via associations, we assume also that the use of propositions will strengthen it.

Deductive reasoning is an ability, which occurs with in human development.

In our research we would like to check how the variability in deductive reasoning ability affects the results of EC, both from associative and propositional perspectives. We will achieve this purpose by examining people of different ages (infants, schoolchildren and adults) and hence different levels of development of reasoning function and underlying ability to form propositions. Additionally, will use a tDCS (transcranial direct current stimulation) manipulation on adult volunteers. This manipulation is designed to temporarily alter electrical activity of the desired brain region, in this case parts of prefrontal lobes, involved in higher cognitive processing (namely, reasoning). By doing so, we will be able to observe how suboptimal functioning of brain regions involved in reasoning affect the acquisition of attitudes through evaluative conditioning.

Successful completion of this project will lead to better understanding of processes involved in the forming of attitudes. Besides helping verify valuable information concerning the properties of the EC mechanism, has vast impact for practical and everyday life purposes. It will help identify effective means of getting attitude.