Using electromyography (EMG), it has been shown that facial muscles imperceptibly mirror the facial expressions of others, a phenomenon referred to as spontaneous facial mimicry. Facial mimicry may be involved in empathy processing, and is impaired in several empathy deficit disorders. It was previously believed to follow the direct-matching principle, a theory postulating that spontaneous facial mimicry involves the observer mirroring their partner's expression exactly. However, several recent studies have demonstrated that context and individual differences may be influencing factors of spontaneous facial mimicry. In the present study, we propose to investigate the relationship between facial mimicry and empathy through measuring the EMG response of participants with high and low trait sadism. EMG recordings will be measured from the corrugator supercilii, zygomaticus major, lateral frontalis, and levator labii superioris. In Study 1, participants will view dynamic emotional expression videos, then identify the emotion and rate the genuineness and intensity of the emotion. In Study 2, participants will view images of limbs in pain or in similar neutral situations. In Study 3, participants will compete against an alleged opponent for the chance to punish their opponent. We hypothesize that mimicry does not follow the direct matching principle, but reflects the endogenous emotional state of the observer. This study will allow for a better understanding of the nuanced mechanisms of empathy, and may resolve the current debate regarding which theory best describes the operation of mimicry.