We analyze the temporal focus concomitant with anxiety and sadness, using large-scale online data from Twitter.

**Time Focus in MD and GAD**

Generalized anxiety disorder (GAD) and major depression (MD) are both characterized by the presence of negative repetitive thought. It has been hypothesized that repetitive thought is rather future-oriented in GAD (‘worry’) and past oriented in MD (‘rumination’; Papageorgiou & Wells, 1999; Watkins, Moulds, & Mackintosh, 2005). However, some authors doubt that this distinction can be upheld (McEvoy, Mahoney, & Moulds, 2010; Gruber, Eidelman, & Harvey, 2008), and claim that worry and rumination are present in both GAD and MD, and are therefore better subsumed under the more general concept of negative repetitive thought.

We approach this question by looking at the emotions analogous to MD and GAD, sadness and anxiety, as they are present in the non-clinical population. We hypothesize, that those emotional states should reflect the change of temporal focus present in MD and GAD.

**Methodology**

- Dataset: 9 Million Tweets, posted between 2010 and 2012
- Emotion detection with LIWC-based tool (Tausczik & Pennebaker, 2010)
- Tweets categorized according to exclusive emotion
- Time focus through year mentioned in tweet: Past year, Present, Future

**Outcomes**

As predicted, focus on past events is most pronounced in sad tweets, while future focus is highest in anxious tweets. However, both sad and anxious tweets are significantly less present- and more past-oriented than tweets in general. This hints to a common trait of both worry and rumination, the relative neglect of current events. As Epel, Bandura, & Zimbardo (1999) pointed out, a lack of present orientation can obstruct successful coping.

**Literature**