

# **DPHil Thesis: Does mental imagery act as an emotional amplifier in bipolar disorders?**

**Man Kin NG**

**Green Templeton College**

## **Abstract**

Bipolar disorder is characterized by episodes of extreme mood swings and, for some, serious suicidal risk. Early evidence suggests that euthymic bipolar patients have high mental imagery susceptibility (on measures of general use of imagery in daily life and emotional impact of prospective imagery). The aims of this thesis were to:

- a) explore these suggestions in not only euthymic patients but in those at different phases of bipolar disorder, and in patients with high risk of developing bipolar disorders (i.e. sub-threshold bipolar disorders, clinical hypomania, and people with first degree relatives suffering from bipolar disorders),
- b) explore how mental imagery susceptibility, ruminative processing, and behavioural activation system (BAS) sensitivity might interact to amplify mood symptoms in patients with bipolar I disorder, sub-threshold bipolar disorders, and people with high risk of developing bipolar disorders.

Chapter 1 provides a literature review of current research on theories of mood amplification and recurrence of mood episodes in bipolar disorders. Chapter 2 details the local Hong Kong Chinese validation of various scales used in the thesis. Study 1 (Chapter 3) investigated whether mental imagery susceptibility, positive rumination, and BAS sensitivity were elevated in patients with bipolar I disorder in remission (i.e. euthymia with good functional recovery) when compared with unipolar depressed and non-psychiatric controls. Results suggested that these cognitive variables were elevated in remitted bipolar I disorder. Positive rumination also interacted with positive prospective images to predict bipolarity. Chapter 4 (Study 2) extended the finding that, when compared with unipolar depression, these cognitive variables were elevated in bipolar I disorder across both manic and euthymic phases. Moreover, the number of positive prospective images determined the severity and resolution of mania over twelve weeks. Chapters 5, 6 and 7 further reported that, in

comparison with people without bipolar spectrum conditions, these cognitive characteristics were elevated in sub-threshold bipolar disorder (Study 3), individuals with high bipolar risks based on a behavioural paradigm (Study 4), and at-risk individuals based on familial risk (Study 5). Studies 3-5 have further confirmed that positive and negative prospective images interact with rumination to amplify hypomanic and depressive symptoms respectively. Study 6 (Chapter 8) showed that suicidal flash-forwards (i.e. images related to suicide) might function as a psychological escape from perceived entrapment and defeat in suicidality. Suicidal flash-forwards were more likely to arise in response to entrapment sense in suicidal individuals with high bipolarity. Based on the findings of these six studies, Chapter 9 proposed a number of novel imagery-based techniques for targeting problem imagery in bipolar disorders.

In conclusion, the thesis supports the notion that mental imagery susceptibility might be trait and state markers associated with bipolarity and play a key role in amplifying both positive and negative pathological emotions. The thesis was limited by small patient samples, lack of objective or laboratory measures for imagery susceptibility and rumination, predominant use of cross-sectional study design, and short follow-up duration for the longitudinal studies. Future direction includes exploring the potential use of imagery measures as measures of onset and episode recurrence of bipolar disorders, and evaluating the effectiveness of the proposed imagery-based strategies in inducing remission and minimising subsequent relapses in bipolar disorders.