“The mind is the effect, not the cause.”
Daniel Dennett
## Contents

### Chapter 1

**General introduction**
- The tension between introspection and behavior  
- Return of the wandering mind  
- A global workspace model of conscious thought  
- A standardized approach to studying resting-state cognition  
- Clinical relevance of subjective experience  
- Aim and outline of the thesis

### Chapter 2

**The Amsterdam Resting-State Questionnaire reveals multiple phenotypes of resting-state cognition**
- Abstract  
- Introduction  
- Materials and Methods  
  - Self-report Amsterdam Resting-State Questionnaire (ARSQ)  
  - Participants  
  - Assessment of resting-state cognition  
  - Questionnaire data preparation  
  - EEG recordings  
  - EEG analysis  
- Results  
  - Seven dimensions of resting-state cognition  
  - Stability and variability of resting-state cognition  
  - The ARSQ correlates with established psychometric scales  
  - Sleepiness correlates with clinically relevant EEG biomarkers  
- Discussion  
- Acknowledgements

### Chapter 3

**The ARSQ 2.0 reveals age and personality effects on mind-wandering experiences**
- Abstract  
- Introduction  
- Materials and Methods  
  - Participants  
  - Online ARSQ assessment procedure  
  - International Personality Item Pool  
  - Data preparation & Analysis  
- Results  
  - An improved 10-factor Amsterdam Resting-State Questionnaire  
  - Stability of ARSQ factors over time  
  - Mind wandering and personality traits  
- Discussion  
- Acknowledgements  
- Supplement S3
Chapter 6
EEG-Biofeedback as a tool to modulate arousal:
Trends and perspectives for treatment of ADHD and insomnia

Introduction 108
EEG-biofeedback in ADHD 111
  Training duration and feedback 111
  Target brain activity 112
  Efficacy of EEG-biofeedback in the treatment of ADHD 114
EEF as treatment of insomnia 114
Efficacy of EEG-biofeedback in the treatment of insomnia 120
Conclusion 121

Chapter 7
General Discussion 124

Conception of the Amsterdam Resting-State Questionnaire 125
Derivation of resting-state cognition model 127
Identifying neural correlates of consciousness using the ARSQ 128
Potential applications for the ARSQ 130
Conclusion and recommendations 131

References 134

Summary 158

Samenvatting (Dutch Summary) 162

Acknowledgements 166