Chapter I
Introduction [1]

- 1.1a Perception & Gestalt Psychology [3]
- 1.1b Neuronal response & Receptive fields [7]
- 1.1c Flow of information in the visual system [12]
- 1.1d Topographic organization of the cortex [16]
- 1.1e Attention & Feedback processing [18]

1.2 Research Question [24]

Chapter Introductions

1.3 Measuring attention's molecular foundation [25]
1.4 Attention and learning [26]
1.5 Spread of attention [27]
1.6 Working memory processing [29]
1.7 Recurrent processing in conscious awareness [30]
1.8 References [32]

Chapter II

Abstract [44]
Introduction [45]
Methods [50]

- Curve tracing task [50]
- Monkeys and surgeries [51]
- Maintenance of the recording chamber [51]
- Preparation of the electrode and solutions [52]
- Electrode design [53]
- Recording setup [53]
- Calibration [54]
Chapter III

Abstract [68]
Introduction [69]
Results [71]
  • Icon learning task [72]
  • Probe task [75]
  • Visual search task [77]
Discussion [81]
Methods [87]
  • Participants [87]
  • Stimuli and Apparatus [88]
  • Tasks [88]
References [93]

Chapter IV

Abstract [98]
Introduction [99]
Experiment 1 [106]
  • 2.1 Methods [107]
  • 2.1.1 Participants [107]
  • 2.1.2 Stimuli and apparatus [107]
  • 2.1.3 Procedure [109]
  • 2.1.4 Analysis [110]
  • 2.2 Results [110]
  • 2.3 Discussion [112]
Experiments 2 [114]
Chapter V
Abstract [140]
Introduction [141]
Methods [143]
  • Surgical procedures [143]
  • Behavioral Task [145]
  • Electrophysiology and iontophoresis [145]
  • Data acquisition [147]
  • Data analyses [148]
  • Statistical analyses [148]
Results [149]
  • NMDA [149]
  • AMPA [154]
Discussion [157]
Chapter VI

Abstract [168]
Introduction [169]
Results [171]
- Contrast detection task [171]
- Phosphene detection task [177]
Discussion [180]
Methods [182]
- Surgeries and RF mapping [182]
- Behavioral setup [184]
- Contrast detection task [184]
- Phosphene detection task [185]
- Data acquisition and artifact removal [186]
- Data analyses [187]
- Statistical tests [188]
References [189]
Supplementary figures [192]