

Content

List of Tables

List of Figures

0. Overview	1
1. Introduction	2
1.1 Human action	2
1.1.1 The sensorimotor view.....	4
1.1.2 The ideomotor view	6
1.1.3 The common coding theory & The theory of event coding	8
1.1.4 Neuroanatomy of intentional actions.....	12
1.1.5 Internal models	18
1.2 Awareness of intentional actions	23
1.2.1 The perceived time of an intention.....	23
1.2.2 The perceived time of a movement.....	29
1.2.3 Awareness of sensory and motor corrections	31
1.2.3.1 Corrections in pointing movements.....	32
1.2.3.2 Corrections in line-drawing.....	33
1.2.3.3 Corrections in sensory stimulation.....	35
1.2.3.4 Conclusions	36
1.2.4 Summary	37
1.3 Awareness of observed actions	39
1.3.1 Behavioural studies.....	40
1.3.2 Neuronal studies.....	43
1.3.3 Summary.....	46
1.4 Temporal binding.....	48
1.4.1 Evidence for temporal binding	49
1.4.2 Summary	53
2. Empirical part.....	55
2.1 Research questions.....	55
2.2 Overview.....	57

2.3 Empirical part I	68
2.3.1 Experiment 1	59
2.3.1.1 Method	60
2.3.1.2 Results	64
2.3.1.3 Discussion	68
2.3.2 Experiment 2	72
2.3.2.1 Method	73
2.3.2.2 Results	74
2.3.2.3 Discussion	78
2.3.3 Experiment 3	80
2.3.3.1 Method	80
2.3.3.2 Results	83
2.3.3.3 Discussion	84
2.3.4 General discussion of the first empirical part	86
2.4 Empirical part II:	91
2.4.1 Experiment 4:	92
2.4.1.1 Method	93
2.4.1.2 Results	95
2.4.1.3 Discussion	97
2.4.2 Experiment 5:	99
2.4.2.1 Method	99
2.4.2.2 Results	100
2.4.2.3 Discussion	101
2.4.3 Experiment 6	103
2.4.3.1 Method	103
2.4.3.2 Results	104
2.4.3.3 Discussion	105

2.4.4	Experiment 7.....	107
2.4.4.1	Method	107
2.4.4.2	Results	108
2.4.4.3	Discussion	110
2.4.5	General discussion of the second empirical part	111
3.	General discussion.....	116
3.1	Summary of the results	116
3.2	Temporal binding and movement-awareness	119
3.3	Temporal binding and intentional actions.....	121
3.4	The mechanism of temporal binding	122
3.4.1	Associations between sequential events.....	123
3.4.2	Associations between movements and effects.....	123
3.4.3	Determinants of movement-effect associations	125
3.4.4	Temporal binding for anticipated effects	127
4.	Further questions	129
5.	References	135
6.	German summary/deutsche Zusammenfassung	149
7.	Lebenslauf	159