Additional file 1: Overview of transformation of the bimanual parameters of the Kinarm exoskeleton

Task	Classification	Parameter	Transformation	
			Comparison uCP - TDC	**Comparison MACS levels**
BOB task	**Bimanual: coupling**	***Mean bar tilt***	Level 1: logarithm, Level 2: square root	Level 1: logarithm, Level 2: square root
		Bar tilt standard deviation	Level 1: logarithm, Level 2: logarithm	Level 1: logarithm, Level 2: logarithm
		Bar length variability	Level 1: square root, Level 2: logarithm	Level 1: square root, Level 2: logarithm
	Bimanual: interlimb	***Reaction time difference***	Level 1: logarithm	Level 1: logarithm
		Hand speed difference	Level 1: logarithm, Level 2: logarithm	Level 1: logarithm, Level 2: none
		Hand speed peaks bias	Level 1: none, Level 2: none	Level 1: none, Level 2: none
		Hand path length bias	Level 1: none, Level 2: reflect logarithm	Level 1: none, Level 2: none
OH task	**Bimanual: Coupling**	***Hand transition***	none	none
		Hand selection overlap	square root	square root
	Bimanual: Interlimb	***Hand bias hits***	logarithm	logarithm
		Hand speed bias	none	square root
		Movement area bias	reflect logarithm	reflect logarithm
Circuit task	**Bimanual**	***Bimanual coordination factor***	none	None

BOB task = Ball-on-bar task, OH task = Object hit task, uCP = unilateral cerebral palsy, TDC = typically developing children, MACS = manual Ability Classification System