TITLE: Synchrony and motor mimicking in chimpanzee observational learning

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SUPPLEMENTARY INFORMATION

Supplementary Table 1. Details of videos, participants and coding procedure. Abbreviations: proximal interphalangeal joint of the hand (IPI): middle phalanx of the hand (MP).

	VIDEO 1	**VIDEO 2**	**VIDEO 3**	**VIDEO 4**	**VIDEO 5**
Model					
Identity	Mawa	Mawa	Mawa	Experimenter	Experimenter
Body-part coded	left 3rd IPI	left 3rd IPI	left 3rd IPI	right 2rd IPI	right 3rd IPI
Number of nut-cracking bouts	1	4	5	3	1
Overall number of nut-cracking beats	11	10	12	13	7
Nut-cracking interruptions	None	Nut rolls away	Nut rolls away	Nut rolls away	None
Observer					
Identity	Baluku	Baluku	Baluku	Baluku	Baluku
Body part coded	right 3rd IPI	right 5th MP; piece of straw on the back	right 3rd IPI; right ear	right 3rd IPI; right ear	right 3rd IPI
Number of mimicry bouts	1	1	3	2	1
Overall number of beats or sways	8	4	8	7	5
Beats vs. sways	All beats	Very 1st beat, rest hand not visible	All beats apart from very last	1st bout only sways, 2nd bout only beats	All beats
Observation interruptions	Stops to look at his foot	Pauses to scratch	Pauses to scratch	Pauses to spin	None

Supplementary Table 2. Results of Shapiro-Wilk (W) test of normality for interval durations. P-values below 0.05 indicate that the variable was not normally distributed. Abbreviations: V1-5 (Video 1 - 5), Model (M), Observer (O).

	V1(M)	V1(O)	V2(M)	V2(O)	V3(M)	V3(O)	V4(M)	V4(O)	V5(M)	V5(O)
W	0.757	0.793	0.872	0.850	0.829	0.905	0.747	0.724	0.773	0.858
df	9	7	15	12	15	21	18	17	6	6
p	0.007	0.035	0.036	0.037	0.009	0.044	<0.001	<0.001	0.033	0.184

Supplementary Table 3. Results of covariance stationarity analysis for original and differenced data used for the Monte Carlo permutation test. For the ADF test 1 indicates that there is a unit root present, and the series is not covariance stationary (CS), while 0 indicates that there is no unit root present and the series is CS. The opposite is true for the KPSS test where 0 implies unit root and 1 implies no unit root at $p<0.05$. Values are reported for both tests with 30 lags included.

Abbreviations: V1-5 (Video 1 - 5), Model (M), Observer (O).

Original Data										
	V1 (M)	*V1(O)*	*V2(M)*	*V2(O)*	*V3(M)*	*V3(O)*	*V4(M)*	*V4(O)*	*V5(M)*	*V5(0)*
ADF	1	1	1	1	1	1	1	1	1	1
KPSS	1	0	1	0	0	0	0	1	1	1
Differenced Data										
	V1 (M)	*V1(O)*	*V2(M)*	*V2(O)*	*V3(M)*	*V3(O)*	*V4(M)*	*V4(O)*	*V5(M)*	*V5(0)*
ADF	0	0	0	0	0	0	0	1	0	0
KPSS	1	1	1	1	1	1	1	1	1	1

Supplementary Video 1. Video 1 - Observer Baluku, model Mawa

Supplementary Video 2. Video 2 - Observer Baluku, model Mawa

Supplementary Video 3. Video 3 - Observer Baluku, model Mawa

Supplementary Video 4. Video 4 - Baluku, model experimenter

Supplementary Video 5. Video 5 - Baluku, model experimenter