

Supplementary material

Table S1. Lag sequential and polar coordinate analyses of two lags of Olympians winners.

	1-point actions					3-point actions				
	Lag sequential analysis									
	-2	-1	0	1	2	-2	-1	0	1	2
BLO	-1.10	1.11	0.00	-1.20	0.73	1.06	-1.11	0.00	1.16	-0.73
DOD	-1.00	0.27	0.00	-0.10	1.04	1.00	-0.27	0.00	0.05	-1.04
CUT	-1.10	-1.90	0.00	0.75	-0.30	1.06	1.88	0.00	-0.75	0.29
APE	-0.40	-0.30	0.81	1.57	-0.90	0.36	0.34	-0.81	-1.57	0.89
DIA	1.11	0.79	2.07	-1.30	-1.40	-1.11	-0.79	-2.07	1.30	1.38
INA	0.57	-2.30	-0.2	0.47	0.03	-0.57	2.33	0.22	-0.47	-0.03
ACA	0.00	0.00	1.16	0.75	0.00	0.00	0.00	-1.16	-0.75	0.00
SCA	1.11	0.21	-1.7	-0.3	1.31	-1.11	-0.21	1.74	0.32	-1.31
PCA	0.00	1.38	-1.5	0.75	0.73	0.00	-1.38	1.54	-0.75	-0.73
LIN	1.40	0.09	1.88	-0.4	-1.50	-1.40	-0.09	-1.88	0.35	1.51
CIR	-0.90	0.46	-0.7	0.74	1.51	0.92	-0.46	0.74	-0.74	-1.51
SPI	0.00	-0.70	-2.20	-1.10	0.00	0.00	0.70	2.23	1.12	0.00
PUN	-0.40	0.00	0.00	0.79	0.00	0.40	0.00	0.00	-0.79	0.00
TRU	-1.20	-0.10	5.88	-1.20	-0.80	1.20	0.06	-5.88	1.19	0.76
HEA	1.20	0.06	-5.9	1.19	0.76	-1.20	-0.06	5.88	-1.19	-0.76
RIG	-0.40	-0.10	0.47	0.33	-1.60	0.42	0.12	-0.47	-0.33	1.56
LEF	0.42	0.12	-0.5	-0.30	1.56	-0.42	-0.12	0.47	0.33	-1.56
FRO	0.12	-0.70	0.49	0.05	-2.30	-0.12	0.72	-0.49	-0.05	2.28
BAC	-0.10	0.72	-0.50	-0.10	2.28	0.12	-0.72	0.49	0.05	-2.28
	Polar coordinate analysis									
	Q	Pro.	Ret.	r	θ	Q	Pro.	Ret.	r	θ
BLO	II	-0.30	0.04	0.31	173.37	IV	0.30	-0.04	0.31	353.37
DOD	IV	0.70	-0.52	0.87	323.6	II	-0.70	0.52	0.87	143.60
CUT	IV	0.33	-2.08	2.10	278.89	II	-0.33	2.08	2.10	98.89
APE	I	0.48	-0.49	0.69	314.17	II	-0.48	0.49	0.69	134.17
DIA	II	-1.90	1.34	2.32	144.67	IV	1.90	-1.34	2.32	324.67
INA	IV	0.35	-1.24	1.29	285.86	II	-0.35	1.24	1.29	105.86
ACA	I	0.53	0.00	0.53	0.00	I	-0.53	0.00	0.53	0.00
SCA	IV	0.70	0.93	1.17	53.13	III	-0.70	-0.93	1.17	233.13
PCA	IV	1.05	0.98	1.43	43.00	III	-1.05	-0.98	1.43	223.00
LIN	II	-1.32	1.05	1.69	141.3	IV	1.32	-1.05	1.69	321.3
CIR	IV	1.59	-0.33	1.62	348.45	II	-1.59	0.33	1.62	168.45
SPI	III	-0.79	-0.49	0.93	212.01	I	0.79	0.49	0.93	32.01
PUN	IV	0.56	-0.28	0.63	333.15	II	-0.56	0.28	0.63	153.15
TRU	II	-1.38	-0.89	1.64	212.87	I	1.38	0.89	1.64	32.87
HEA	IV	1.38	0.89	1.64	32.87	III	-1.38	-0.89	1.64	212.87
RIG	III	-0.87	-0.38	0.95	203.70	I	0.87	0.38	0.95	23.70
LEF	I	0.87	0.38	0.95	23.70	III	-0.87	-0.38	0.95	203.70
FRO	III	-1.58	-0.42	1.63	195.06	I	1.58	0.42	1.63	15.06
BAC	I	1.58	0.42	1.63	15.06	III	-1.58	-0.42	1.63	195.06

Note: Bold indicate significant relationships. Lags were included as retrospective (-2, -1), effective focal behavior (0) and prospective (1, 2). Q = quadrant, Pro. = prospective, Ret. = retrospective, r = radial, θ = angle. BLO= block, DOD= dodge, CUT= cut, APE = opening, DIA=direct attack, INA= indirect attack, ACA= anticipatory counterattack, SCA= simultaneous counterattack, PCA= posterior counterattack, LIN= linear technique, CIR = circular technique, SPI = spinning technique, PUN = punch, TRU= actions to the trunk, HEA= actions to the head, RIG = right, LEF= left, FRO= front leg, BAC= back leg.

Table S2. *Lag sequential and polar coordinate analyses of two lags of Olympians losers.*

	1-point actions					3-point actions				
	Lag sequential analysis									
	-2	-1	0	1	2	-2	-1	0	1	2
BLO	0.72	-0.52	0.00	0.05	0.72	-0.72	0.52	0.00	-0.05	-0.72
DOD	-2.45	1.53	0.00	0.76	-0.30	2.45	-1.53	0.00	-0.76	0.30
CUT	-1.44	0.00	0.00	0.00	-1.44	1.44	0.00	0.00	0.00	1.44
APE	0.72	-0.52	0.00	-0.48	0.00	-0.72	0.52	0.00	0.48	0.00
DIA	0.60	-0.56	3.05	-0.77	0.31	-0.6	0.56	-3.05	0.77	-0.31
INA	1.04	0.00	-3.46	0.44	-0.52	-1.04	0.00	3.46	-0.44	0.52
ACA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCA	0.60	-0.52	0.98	0.05	0.70	-0.60	0.52	-0.98	-0.05	-0.70
PCA	0.72	0.72	-1.44	0.00	0.00	-0.72	-0.72	1.44	0.00	0.00
LIN	0.32	0.00	0.82	-0.26	0.34	-0.32	0.00	-0.82	0.26	-0.34
CIR	-0.32	0.65	-0.54	-0.12	-0.71	0.32	-0.65	0.54	0.12	0.71
SPI	0.00	-1.33	-0.52	0.00	0.66	0.00	1.33	0.52	0.00	-0.66
PUN	0.00	0.00	0.00	0.76	0.00	0.00	0.00	0.00	-0.76	0.00
TRU	0.57	-0.80	4.77	-1.49	1.64	-0.57	0.80	-4.77	1.49	-1.64
HEA	-0.57	0.80	-4.77	1.49	-1.64	0.57	-0.80	4.77	-1.49	1.64
RIG	-0.55	0.14	0.98	-0.27	0.00	0.55	-0.14	-0.98	0.27	0.00
LEF	0.55	-0.14	-0.98	0.27	0.00	-0.55	0.14	0.98	-0.27	0.00
FRO	1.50	1.16	1.19	1.16	1.12	-1.50	-1.16	-1.19	-1.16	-1.12
BAC	-1.50	-1.16	-1.19	-1.16	-1.12	1.50	1.16	1.19	1.16	1.12
	Polar coordinate analysis									
	Q	Pro.	Ret.	r	θ	Q	Pro.	Ret.	r	θ
BLO	I	0.54	0.14	0.56	14.56	III	-0.54	-0.14	0.56	194.56
DOD	IV	0.33	-0.65	0.73	296.57	II	-0.33	0.65	0.73	116.57
CUT	III	-1.02	-1.02	1.44	225.00	I	1.02	1.02	1.44	45.00
APE	II	-0.34	0.14	0.37	157.38	IV	0.34	-0.14	0.37	337.38
DIA	II	-0.33	0.03	0.33	175.03	IV	0.33	-0.03	0.33	355.03
INA	II	-0.06	0.74	0.74	94.40	I	0.06	-0.74	0.74	274.40
ACA	IV	0.00	0.00	0.00	0.00	IV	0.00	0.00	0.00	0.00
SCA	I	0.53	0.06	0.53	6.09	III	-0.53	-0.06	0.53	186.09
PCA	I	0.00	1.02	1.02	90.00	IV	0.00	-1.02	1.02	270.00
LIN	I	0.06	0.23	0.23	75.96	III	-0.06	-0.23	0.23	255.96
CIR	II	-0.59	0.23	0.63	158.32	I	0.59	-0.23	0.63	338.32
SPI	IV	0.47	-0.94	1.05	296.39	II	-0.47	0.94	1.05	116.39
PUN	I	0.54	0.00	0.54	0.00	I	-0.54	0.00	0.54	0.00
TRU	IV	0.11	-0.16	0.19	303.11	III	-0.11	0.16	0.19	123.11
HEA	II	-0.11	0.16	0.19	123.11	I	0.11	-0.16	0.19	303.11
RIG	III	-0.19	-0.29	0.35	236.63	IV	0.19	0.29	0.35	56.63
LEF	I	0.19	0.29	0.35	56.63	II	-0.19	-0.29	0.35	236.63
FRO	I	1.61	1.88	2.48	49.40	III	-1.61	-1.88	2.48	229.40
BAC	III	-1.61	-1.88	2.48	229.40	I	1.61	1.88	2.48	49.40

Note: Bold indicate significant relationships. Lags were included as retrospective (-2, -1), effective focal behavior (0) and prospective (1, 2). Q = quadrant, Pro. = prospective, Ret. = retrospective, r = radial, θ = angle. BLO= block, DOD= dodge, CUT= cut, APE = opening, DIA=direct attack, INA= indirect attack, ACA= anticipatory counterattack, SCA= simultaneous counterattack, PCA= posterior counterattack, LIN= linear technique, CIR = circular technique, SPI = spinning technique, PUN = punch, TRU= actions to the trunk, HEA= actions to the head, RIG = right, LEF= left, FRO= front leg, BAC= back leg.

Table S3. Lag sequential and polar coordinate analyses of two lags of Olympians winners for 1-point actions according to the round.

Winners 1 point															
Round 1						Round 2					Round 3				
Lag sequential analysis															
	-2	-1	0	1	2	-2	-1	0	1	2	-2	-1	0	1	2
BLO	0.00	0.00	0.00	0.00	0.00	-0.47	1.01	0.00	-1.39	0.70	-1.38	0.00	0.00	0.00	0.00
DOD	0.49	0.13	0.00	-0.71	0.88	-2.40	0.32	0.00	-0.09	0.70	0.19	0.18	0.00	-0.18	0.00
CUT	-1.15	-1.39	0.00	0.79	0.88	-0.47	0.00	0.00	0.00	-1.39	0.00	-0.95	0.00	0.00	0.83
APE	0.96	0.79	0.00	0.00	-1.24	-1.40	-1.54	0.75	1.51	-0.45	0.00	1.19	0.00	0.00	0.83
DIA	-0.14	1.18	1.69	-1.39	0.10	0.78	-0.45	0.72	-0.06	-0.86	1.26	0.95	1.55	-0.95	-0.42
INA	0.96	-2.07	-1.24	0.00	-1.83	1.08	-1.50	0.78	1.27	1.01	-1.38	0.00	-1.15	-1.19	0.00
ACA	0.00	0.00	0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.96	0.95	0.00
SCA	-0.87	0.79	0.10	1.03	1.31	2.08	1.51	-1.68	-1.39	0.65	0.83	-1.43	-1.71	0.95	-0.73
PCA	0.00	0.79	-1.83	0.00	0.00	0.00	0.70	0.00	0.00	0.70	0.00	0.00	-0.14	0.95	0.00
LIN	0.00	0.77	0.34	-0.61	-1.90	0.69	0.13	1.31	0.00	-1.41	0.77	-0.91	1.55	-0.42	1.10
CIR	-0.94	0.61	1.09	1.73	1.90	-0.69	0.13	-0.72	0.95	1.41	0.00	0.91	-1.55	-0.73	-1.10
SPI	0.00	-1.55	-1.83	-1.55	0.00	0.00	-0.28	-1.40	-1.50	0.00	0.00	0.00	0.00	0.83	0.00
PUN	0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.61	0.00	0.00	0.83	0.00
TRU	0.00	1.55	2.37	0.00	0.00	-0.57	-0.96	4.34	-0.75	-0.60	-0.67	0.00	3.32	-0.94	0.00
HEA	0.00	-1.55	-2.37	0.00	0.00	0.57	0.96	-4.34	0.75	0.60	0.67	0.00	-3.32	0.94	0.00
RIG	0.00	-1.73	-1.69	-0.77	-0.69	-0.96	-0.49	1.03	0.00	0.34	2.00	1.49	1.71	1.25	0.00
LEF	0.00	1.73	1.69	0.77	0.69	0.96	0.49	-1.03	0.00	-0.34	-2.00	-1.49	-1.71	-1.25	0.00
FRO	-1.10	-1.73	-0.83	-0.77	-1.58	-0.44	0.28	1.49	0.57	-1.15	2.00	-0.37	0.00	0.24	-1.10
BAC	1.10	1.73	0.83	0.77	1.58	0.44	-0.28	-1.49	-0.57	1.15	-2.00	0.37	0.00	-0.24	1.10
Polar coordinate analysis															
	Q	Pros	Ret	Rad	Ang	Q	Pros	Ret	Rad	Ang	Q	Pros	Ret	Rad	Ang
BLO	IV	0.00	0.00	0.00	0.00	II	-0.49	0.38	0.62	141.95	III	0.00	-0.98	0.98	270.00
DOD	I	0.12	0.44	0.45	74.67	IV	0.43	-1.47	1.53	286.34	II	-0.13	0.26	0.29	115.94
CUT	IV	1.18	-1.8	2.15	303.32	III	-0.98	-0.33	1.04	198.68	IV	0.59	-0.67	0.89	311.14
APE	II	-0.88	1.24	1.52	125.32	IV	0.75	-2.08	2.21	289.83	I	0.59	0.84	1.03	55.11
DIA	II	-0.91	0.74	1.17	141.12	II	-0.65	0.23	0.69	160.27	II	-0.97	1.56	1.84	121.80
INA	III	-1.29	-0.78	1.51	211.24	IV	1.61	-0.30	1.64	349.56	III	-0.84	-0.98	1.29	229.23
ACA	IV	0.00	0.00	0.00	0.00	IV	0.00	0.00	0.00	0.00	I	0.67	0.00	0.67	0.00
SCA	IV	1.65	-0.06	1.66	358.04	II	-0.52	2.54	2.59	101.65	IV	0.16	-0.42	0.45	290.14
PCA	I	0.00	0.56	0.56	90.00	I	0.49	0.49	0.70	45.00	I	0.67	0.00	0.67	0.00
LIN	II	-1.77	0.54	1.86	162.95	II	-1.00	0.58	1.15	149.82	IV	0.48	-0.10	0.49	348.37
CIR	IV	2.57	-0.23	2.58	354.81	IV	1.67	-0.40	1.72	346.65	II	-1.29	0.64	1.45	153.56
SPI	III	-1.10	-1.10	1.55	225.00	III	-1.06	-0.20	1.08	190.57	I	0.59	0.00	0.59	0.00
PUN	I	0.00	0.66	0.66	90.00	IV	0.00	0.00	0.00	0.00	IV	0.59	-0.43	0.73	323.69
TRU	I	0.00	1.10	1.10	90.00	III	-0.95	-1.08	1.44	228.58	III	-0.66	-0.47	0.82	215.48
HEA	III	0.00	-1.10	1.10	270.00	I	0.95	1.08	1.44	48.58	I	0.66	0.47	0.82	35.48
RIG	III	-1.03	-1.22	1.60	229.84	IV	0.24	-1.03	1.05	283.2	I	0.88	2.47	2.62	70.29
LEF	I	1.03	1.22	1.60	49.84	II	-0.24	1.03	1.05	103.2	III	-0.88	-2.47	2.62	250.29
FRO	III	-1.66	-2.00	2.60	230.29	III	-0.41	-0.11	0.43	195.42	II	-0.61	1.15	1.30	117.82
BAC	I	1.66	2.00	2.60	50.29	I	0.41	0.11	0.43	15.42	IV	0.61	-1.15	1.30	297.82

Note: Bold indicate significant relationships. Lags were included as retrospective (-2, -1), effective focal behavior (0) and prospective (1, 2). Q = quadrant, Pro. = prospective, Ret. = retrospective, r = radial, θ = angle. BLO= block, DOD= dodge, CUT= cut, APE = opening, DIA=direct attack, INA= indirect attack, ACA= anticipatory counterattack, SCA= simultaneous counterattack, PCA= posterior counterattack, LIN= linear technique, CIR = circular technique, SPI = spinning technique, PUN = punch, TRU= actions to the trunk, HEA= actions to the head, RIG = right, LEF= left, FRO= front leg, BAC= back leg.

Table S4. Lag sequential and polar coordinate analyses of two lags of Olympians winners for 3-point actions according to the round.

Winners 3 Points															
Round 1						Round 2					Round 3				
Lag sequential analysis															
	-2	-1	0	1	2	-2	-1	0	1	2	-2	-1	0	1	2
BLO	0.00	0.00	0.00	0.00	0.00	0.47	-1.01	0.00	1.39	-0.70	1.38	0.00	0.00	0.00	0.00
DOD	-0.49	-0.13	0.00	0.71	-0.88	2.40	-0.32	0.00	0.09	-0.70	-0.19	-0.18	0.00	0.18	0.00
CUT	1.15	1.39	0.00	-0.79	-0.88	0.47	0.00	0.00	0.00	1.39	0.00	0.95	0.00	0.00	-0.83
APE	-0.96	-0.79	0.00	0.00	1.24	1.40	1.54	-0.75	-1.51	0.45	0.00	-1.19	0.00	0.00	-0.83
DIA	0.14	-1.18	-1.69	1.39	-0.10	-0.78	0.45	-0.72	0.06	0.86	-1.26	-0.95	-1.55	0.95	0.42
INA	-0.96	2.07	1.24	0.00	1.83	-1.08	1.50	-0.78	-1.27	-1.01	1.38	0.00	1.15	1.19	0.00
ACA	0.00	0.00	-0.88	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-0.96	-0.95	0.00
SCA	0.87	-0.79	-0.10	-1.03	-1.31	-2.08	-1.51	1.68	1.39	-0.65	-0.83	1.43	1.71	-0.95	0.73
PCA	0.00	-0.79	1.83	0.00	0.00	0.00	-0.70	0.00	0.00	-0.70	0.00	0.00	0.14	-0.95	0.00
LIN	0.00	-0.77	-0.34	0.61	1.9	-0.69	-0.13	-1.31	0.00	1.41	-0.77	0.91	-1.55	0.42	-1.10
CIR	0.94	-0.61	-1.09	-1.73	-1.9	0.69	-0.13	0.72	-0.95	-1.41	0.00	-0.91	1.55	0.73	1.10
SPI	0.00	1.55	1.83	1.55	0.00	0.00	0.28	1.40	1.50	0.00	0.00	0.00	0.00	-0.83	0.00
PUN	-0.94	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.61	0.00	0.00	-0.83	0.00
TRU	0.00	-1.55	-2.37	0.00	0.00	0.57	0.96	-4.34	0.75	0.60	0.67	0.00	-3.32	0.94	0.00
HEA	0.00	1.55	2.37	0.00	0.00	-0.57	-0.96	4.34	-0.75	-0.60	-0.67	0.00	3.32	-0.94	0.00
RIG	0.00	1.73	1.69	0.77	0.69	0.96	0.49	-1.03	0.00	-0.34	-2.00	-1.49	-1.71	-1.25	0.00
LEF	0.00	-1.73	-1.69	-0.77	-0.69	-0.96	-0.49	1.03	0.00	0.34	2.00	1.49	1.71	1.25	0.00
FRO	1.10	1.73	0.83	0.77	1.58	0.44	-0.28	-1.49	-0.57	1.15	-2.00	0.37	0.00	-0.24	1.10
BAC	-1.10	-1.73	-0.83	-0.77	-1.58	-0.44	0.28	1.49	0.57	-1.15	2.00	-0.37	0.00	0.24	-1.10
Polar coordinate analysis															
	Q	Pros	Ret	Rad	Ang	Q	Pros	Ret	Rad	Ang	Q	Pros	Ret	Rad	Ang
BLO	IV	0.00	0.00	0.00	0.00	IV	0.49	-0.38	0.62	321.95	I	0.00	0.98	0.98	90.00
DOD	III	-0.12	-0.44	0.45	254.67	II	-0.43	1.47	1.53	106.34	IV	0.13	-0.26	0.29	295.94
CUT	II	-1.18	1.80	2.15	123.32	I	0.98	0.33	1.04	18.68	II	-0.59	0.67	0.89	131.14
APE	IV	0.88	-1.24	1.52	305.32	II	-0.75	2.08	2.21	109.83	III	-0.59	-0.84	1.03	235.11
DIA	IV	0.91	-0.74	1.17	321.12	IV	0.65	-0.23	0.69	340.27	IV	0.97	-1.56	1.84	301.80
INA	I	1.29	0.78	1.51	31.24	II	-1.61	0.30	1.64	169.56	I	0.84	0.98	1.29	49.23
ACA	IV	0.00	0.00	0.00	0.00	IV	0.00	0.00	0.00	0.00	I	-0.67	0.00	0.67	0.00
SCA	II	-1.65	0.06	1.66	178.04	IV	0.52	-2.54	2.59	281.65	II	-0.16	0.42	0.45	110.14
PCA	III	0.00	-0.56	0.56	270	III	-0.49	-0.49	0.70	225	I	-0.67	0.00	0.67	0.00
LIN	IV	1.77	-0.54	1.86	342.95	IV	1.00	-0.58	1.15	329.82	II	-0.48	0.10	0.49	168.37
CIR	II	-2.57	0.23	2.58	174.81	II	-1.67	0.40	1.72	166.65	IV	1.29	-0.64	1.45	333.56
SPI	I	1.10	1.10	1.55	45.00	I	1.06	0.20	1.08	10.57	I	-0.59	0.00	0.59	0.00
PUN	III	0.00	-0.66	0.66	270.00	IV	0.00	0.00	0.00	0.00	II	-0.59	0.43	0.73	143.69
TRU	III	0.00	-1.10	1.10	270.00	I	0.95	1.08	1.44	48.58	I	0.66	0.47	0.82	35.48
HEA	I	0.00	1.10	1.10	90.00	III	-0.95	-1.08	1.44	228.58	III	-0.66	-0.47	0.82	215.48
RIG	I	1.03	1.22	1.60	49.84	II	-0.24	1.03	1.05	103.20	III	-0.88	-2.47	2.62	250.29
LEF	III	-1.03	-1.22	1.60	229.84	IV	0.24	-1.03	1.05	283.20	I	0.88	2.47	2.62	70.29
FRO	I	1.66	2.00	2.60	50.29	I	0.41	0.11	0.43	15.42	IV	0.61	-1.15	1.30	297.82
BAC	III	-1.66	-2.00	2.60	230.29	III	-0.41	-0.11	0.43	195.42	II	-0.61	1.15	1.30	117.82

Note: Bold indicate significant relationships. Lags were included as retrospective (-2, -1), effective focal behavior (0) and prospective (1, 2). Q = quadrant, Pro. = prospective, Ret. = retrospective, r = radial, θ = angle. BLO= block, DOD= dodge, CUT= cut, APE = opening, DIA=direct attack, INA= indirect attack, ACA= anticipatory counterattack, SCA= simultaneous counterattack, PCA= posterior counterattack, LIN= linear technique, CIR = circular technique, SPI = spinning technique, PUN = punch, TRU= actions to the trunk, HEA= actions to the head, RIG = right, LEF= left, FRO= front leg, BAC= back leg.

Table S5. Lag sequential and polar coordinate analyses of two lags of Olympians losers for 1-point actions according to the round.

Losers 1 Point															
Round 1						Round 2					Round 3				
Lag sequential analysis															
	-2	-1	0	1	2	-2	-1	0	1	2	-2	-1	0	1	2
BLO	0.00	-1.61	0.00	-0.57	0.00	-0.94	0.00	0.00	-0.94	-0.94	0.00	0.69	0.00	0.00	0.00
DOD	-2.42	0.69	0.00	-0.57	-1.13	1.25	-0.94	0.00	-0.94	-0.94	-0.69	1.04	0.00	1.04	1.04
CUT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.61	-0.15	0.00	0.00	-1.61
APE	0.00	-1.61	0.00	1.13	0.69	0.00	-0.94	0.00	1.25	1.25	0.69	0.00	0.00	0.00	0.69
DIA	1.04	1.04	1.69	1.13	1.04	0.24	0.44	-1.98	-0.44	0.24	0.28	-1.13	1.69	-2.54	-1.13
INA	0.69	1.04	-1.13	0.00	-1.61	-0.94	1.25	2.65	1.25	0.00	0.00	0.00	-2.42	1.04	0.69
ACA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCA	0.28	-0.69	-0.69	-1.5	0.69	0.24	0.00	-0.94	0.00	0.24	1.04	0.00	1.36	1.04	0.69
PCA	0.69	0.69	0.00	0.00	0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	-1.61	0.00	0.00
LIN	-2.83	0.44	-0.28	0.67	-1.37	-1.49	-1.49	-0.94	-2.00	-1.15	1.10	0.00	0.69	-2.11	0.61
CIR	2.83	-0.44	0.28	-1.15	1.37	1.49	0.91	0.44	2.00	1.15	-1.10	0.00	-0.69	2.11	-1.55
SPI	0.00	0.00	0.00	0.00	0.00	0.00	0.91	0.24	0.00	0.00	0.00	0.00	0.00	0.00	0.77
PUN	0.00	0.00	0.00	0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRU	1.85	-0.44	3.16	0.00	2.24	0.00	0.00	-1.93	0.00	0.00	-0.49	0.00	3.16	-1.70	0.00
HEA	-1.85	0.44	-3.16	0.00	-2.24	0.00	0.00	1.93	0.00	0.00	0.49	0.00	-3.16	1.70	0.00
RIG	-0.83	1.25	2.42	0.87	0.91	0.37	0.37	0.44	0.00	1.15	-0.49	0.00	-0.69	-0.83	0.00
LEF	0.83	-1.25	-2.42	-0.87	-0.91	-0.37	-0.37	-0.44	0.00	-1.15	0.49	0.00	0.69	0.83	0.00
FRO	-0.83	-0.44	0.69	-0.87	2.24	-1.49	-1.49	-0.44	-1.15	1.15	1.55	0.00	0.69	1.38	0.61
BAC	0.83	0.44	-0.69	0.87	-2.24	1.49	1.49	0.44	1.15	-1.15	-1.55	0.00	-0.69	-1.38	-0.61
Polar coordinate analysis															
	Q	Pros	Ret	Rad	Ang	Q	Pros	Ret	Rad	Ang	Q	Pros	Ret	Rad	Ang
BLO	III	-0.40	-1.14	1.21	250.50	I	1.33	0.66	1.49	26.57	I	0.00	0.49	0.49	90.00
DOD	III	-1.20	-1.22	1.72	225.50	IV	1.33	-0.22	1.35	350.64	I	1.47	0.25	1.49	9.55
CUT	IV	0.00	0.00	0.00	0.00	IV	0.00	0.00	0.00	0.00	III	-1.14	-1.24	1.69	227.55
APE	IV	1.29	-1.14	1.72	318.50	II	-1.77	0.66	1.89	159.39	I	0.49	0.49	0.69	45.00
DIA	I	1.53	1.47	2.13	43.79	IV	0.14	-0.48	0.50	286.39	III	-2.60	-0.60	2.66	193.04
INA	II	-1.14	1.22	1.67	132.94	III	-0.88	-0.22	0.91	193.93	I	1.22	0.00	1.22	0.00
ACA	IV	0.00	0.00	0.00	0.00	IV	0.00	0.00	0.00	0.00	IV	0.00	0.00	0.00	0.00
SCA	III	-0.57	-0.29	0.64	206.85	III	-0.17	-0.17	0.24	225.00	I	1.22	0.74	1.43	31.01
PCA	I	0.49	0.98	1.09	63.43	IV	0.00	0.00	0.00	0.00	IV	0.00	0.00	0.00	0.00
LIN	III	-0.49	-1.69	1.76	253.68	I	2.23	2.11	3.07	43.41	II	-1.06	0.78	1.32	143.75
CIR	I	0.16	1.69	1.70	84.74	III	-2.23	-1.7	2.80	217.30	IV	0.40	-0.78	0.87	296.98
SPI	IV	0.00	0.00	0.00	0.00	III	0.00	-0.64	0.64	270	I	0.54	0.00	0.54	0.00
PUN	I	0.47	0.00	0.47	0.00	IV	0.00	0.00	0.00	0.00	IV	0.00	0.00	0.00	0.00
TRU	I	1.58	1.00	1.87	32.19	IV	0.00	0.00	0.00	0.00	III	-1.20	-0.35	1.25	196.08
HEA	III	-1.58	-1.00	1.87	212.19	IV	0.00	0.00	0.00	0.00	I	1.20	0.35	1.25	16.08
RIG	I	1.26	0.30	1.29	13.28	III	-0.81	-0.52	0.97	212.76	III	-0.59	-0.35	0.68	210.56
LEF	III	-1.26	-0.30	1.29	193.28	I	0.81	0.52	0.97	32.76	I	0.59	0.35	0.68	30.56
FRO	IV	0.97	-0.90	1.32	317.17	I	0.00	2.11	2.11	90.00	I	1.41	1.10	1.78	37.91
BAC	II	-0.97	0.90	1.32	137.17	III	0.00	-2.11	2.11	270.00	III	-1.41	-1.10	-0.61	217.91

Note: Bold indicate significant relationships. Lags were included as retrospective (-2, -1), effective focal behavior (0) and prospective (1, 2). Q = quadrant, Pro. = prospective, Ret. = retrospective, r = radial, θ = angle. BLO= block, DOD= dodge, CUT= cut, APE = opening, DIA=direct attack, INA= indirect attack, ACA= anticipatory counterattack, SCA= simultaneous counterattack, PCA= posterior counterattack, LIN= linear technique, CIR = circular technique, SPI = spinning technique, PUN = punch, TRU= actions to the trunk, HEA= actions to the head, RIG = right, LEF= left, FRO= front leg, BAC= back leg.

Table S6. Lag sequential and polar coordinate analyses of two lags of Olympians losers for 3-point actions according to the round.

Losers 3 Points															
	Round 1					Round 2					Round 3				
	Lag sequential analysis														
	-2	-1	0	1	2	-2	-1	0	1	2	-2	-1	0	1	2
BLO	0.00	1.61	0.00	0.57	0.00	0.94	0.00	0.00	0.94	0.94	0.00	-0.69	0.00	0.00	0.00
DOD	2.42	-0.69	0.00	0.57	1.13	-1.25	0.94	0.00	0.94	0.94	0.69	-1.04	0.00	-1.04	-1.04
CUT	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.61	0.15	0.00	0.00	1.61
APE	0.00	1.61	0.00	-1.13	-0.69	0.00	0.94	0.00	-1.25	-1.25	-0.69	0.00	0.00	0.00	-0.69
DIA	-1.04	-1.04	-1.69	-1.13	-1.04	-0.24	-0.44	1.98	0.44	-0.24	-0.28	1.13	-1.69	2.54	1.13
INA	-0.69	-1.04	1.13	0.00	1.61	0.94	-1.25	-2.65	-1.25	0.00	0.00	0.00	2.42	-1.04	-0.69
ACA	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
SCA	-0.28	0.69	0.69	1.50	-0.69	-0.24	0.00	0.94	0.00	-0.24	-1.04	0.00	-1.36	-1.04	-0.69
PCA	-0.69	-0.69	0.00	0.00	-0.69	0.00	0.00	0.00	0.00	0.00	0.00	0.00	1.61	0.00	0.00
LIN	2.83	-0.44	0.28	-0.67	1.37	1.49	1.49	0.94	2.00	1.15	-1.10	0.00	-0.69	2.11	-0.61
CIR	-2.83	0.44	-0.28	1.15	-1.37	-1.49	-0.91	-0.44	-2.00	-1.15	1.10	0.00	0.69	-2.11	1.55
SPI	0.00	0.00	0.00	0.00	0.00	0.00	-0.91	-0.24	0.00	0.00	0.00	0.00	0.00	0.00	-0.77
PUN	0.00	0.00	0.00	-0.67	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
TRU	-1.85	0.44	-3.16	0.00	-2.24	0.00	0.00	1.93	0.00	0.00	0.49	0.00	-3.16	1.70	0.00
HEA	1.85	-0.44	3.16	0.00	2.24	0.00	0.00	-1.93	0.00	0.00	-0.49	0.00	3.16	-1.70	0.00
RIG	0.83	-1.25	-2.42	-0.87	-0.91	-0.37	-0.37	-0.44	0.00	-1.15	0.49	0.00	0.69	0.83	0.00
LEF	-0.83	1.25	2.42	0.87	0.91	0.37	0.37	0.44	0.00	1.15	-0.49	0.00	-0.69	-0.83	0.00
FRO	0.83	0.44	-0.69	0.87	-2.24	1.49	1.49	0.44	1.15	-1.15	-1.55	0.00	-0.69	-1.38	-0.61
BAC	-0.83	-0.44	0.69	-0.87	2.24	-1.49	-1.49	-0.44	-1.15	1.15	1.55	0.00	0.69	1.38	0.61
Polar coordinate analysis															
	Q	Pros	Ret	Rad	Ang	Q	Pros	Ret	Rad	Ang	Q	Pros	Ret	Rad	Ang
BLO	I	0.40	1.14	1.21	70.50	III	-1.33	-0.66	1.49	206.57	III	0.00	-0.49	0.49	270.00
DOD	I	1.20	1.22	1.72	45.50	II	-1.33	0.22	1.35	170.64	III	-1.47	-0.25	1.49	189.55
CUT	IV	0.00	0.00	0.00	0.00	IV	0.00	0.00	0.00	0.00	I	1.14	1.24	1.69	47.55
APE	II	-1.29	1.14	1.72	138.5	IV	1.77	-0.66	1.89	339.39	III	-0.49	-0.49	0.69	225.00
DIA	III	-1.53	-1.47	2.13	223.79	II	-0.14	0.48	0.50	106.39	I	2.60	0.60	2.66	13.04
INA	IV	1.14	-1.22	1.67	312.94	I	0.88	0.22	0.91	13.93	I	-1.22	0.00	1.22	0.00
ACA	IV	0.00	0.00	0.00	0.00	IV	0.00	0.00	0.00	0.00	IV	0.00	0.00	0.00	0.00
SCA	I	0.57	0.29	0.64	26.85	I	0.17	0.17	0.24	45.00	III	-1.22	-0.74	1.43	211.01
PCA	III	-0.49	-0.98	1.09	243.43	IV	0.00	0.00	0.00	0.00	IV	0.00	0.00	0.00	0.00
LIN	I	0.49	1.69	1.76	73.68	III	-2.23	-2.11	3.07	223.41	IV	1.06	-0.78	1.32	323.75
CIR	III	-0.16	-1.69	1.7	264.74	I	2.23	1.7	2.80	37.3	II	-0.40	0.78	0.87	116.98
SPI	IV	0.00	0.00	0.00	0.00	I	0.00	0.64	0.64	90.00	I	-0.54	0.00	0.54	0.00
PUN	I	-0.47	0.00	0.47	0.00	IV	0.00	0.00	0.00	0.00	IV	0.00	0.00	0.00	0.00
TRU	III	-1.58	-1.00	1.87	212.19	IV	0.00	0.00	0.00	0.00	I	1.20	0.35	1.25	16.08
HEA	I	1.58	1.00	1.87	32.19	IV	0.00	0.00	0.00	0.00	III	-1.20	-0.35	1.25	196.08
RIG	III	-1.26	-0.30	1.29	193.28	I	0.81	0.52	0.97	32.76	I	0.59	0.35	0.68	30.56
LEF	I	1.26	0.30	1.29	13.28	III	-0.81	-0.52	0.97	212.76	III	-0.59	-0.35	0.68	210.56
FRO	II	-0.97	0.90	1.32	137.17	III	0.00	-2.11	2.11	270	III	-1.41	-1.10	1.78	217.91
BAC	IV	0.97	-0.90	1.32	317.17	I	0.00	2.11	2.11	90.00	I	1.41	1.10	1.78	37.91

Note: Bold indicate significant relationships. Lags were included as retrospective (-2, -1), effective focal behavior (0) and prospective (1, 2). Q = quadrant, Pro. = prospective, Ret. = retrospective, r = radial, θ = angle. BLO= block, DOD= dodge, CUT= cut, APE = opening, DIA=direct attack, INA= indirect attack, ACA= anticipatory counterattack, SCA= simultaneous counterattack, PCA= posterior counterattack, LIN= linear technique, CIR = circular technique, SPI = spinning technique, PUN = punch, TRU= actions to the trunk, HEA= actions to the head, RIG = right, LEF= left, FRO= front leg, BAC= back leg.