

Supplementary Information

for

The impact of dynamic status changes within competitive rank-ordered hierarchies

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Method

Study 2. We planned to collect approximately 150 participants in each condition. We collected a slightly larger sample of about 175 per cell, to account for duplicate entries. A total of 359 subjects participated in our study from Amazon Mechanical Turk (MTurk). We excluded 9 participants for having duplicate IP addresses. Our final sample consisted of 350 participants, 171 in the control condition and 179 in the momentum condition ($M_{age}=35.36$ years, 48.86% females). Results remain identical if we do not exclude any participants.

In the [control/momentum] condition participants read (within each bracket, first wording represents control and second momentum condition):

So far, you have done well in these competitions. You have been consistently ranked 3rd for the last three years and thus been the recipient of this award three times consecutively. Josh/Jenny is a manager who has a similar position to yours in the Operations department at ABC Company. Josh/Jenny has [been consistently ranked 4→4→4 for /consistently improved his ranking from 8→6→4 in] the last three years and thus has missed out on the award marginally. You have also learned that past performance data used to determine rank is highly reliable and accurate.

Following this, participants read that this year the competition is to suggest ideas that can help reduce paper waste in the company. They also learned that Josh/Jenny is competing, along with other managers from across the company.

Measures. We measured threat based on participants' responses to 12 negative emotional items, which have been used in existing competition literature to assess overall fear or general distress (42). Participants rated on a 7-point scale, how much of each emotion (worried, nervous, threatened, annoyed, scared, insecure, trapped, upset, hesitant, uneasy, unhappy, angry, uncomfortable, aggravated and disappointed) they would experience in anticipation of this year's award. These items were combined to create a composite of threat ($\alpha=.96$). Additionally, we also measured threat using three subjective measures by asking participants to report, 1) "how

threatened do you feel that Josh/Jenny may move ahead of you in this year's rankings" (1 = *Not at all*; 9 = *Extremely threatened*), 2) "*likelihood that Josh/Jenny will move ahead of you in this year's competition*" (0 = 0% *Likelihood*; 10 = 100% *Likelihood*), and 3) "*likelihood that you will rank among the top three in this year's competition*" (0 = 0% *Likelihood*; 10 = 100% *Likelihood*) (reverse-coded). These three items were mean centered and combined to create a composite of subjective threat ($\alpha=.67$). Since psychological momentum explanation is based on the projection of future rank among actors associated with status momentum, we measured the mediator – expectation of future rank – by asking participants to indicate "*the rank they expect Josh/Jenny to have at the conclusion of this year's competition*" by choosing any rank between 1 and 10. We coded rank 1 as 1 and 10 as 10, thus smaller numerical value of rank implied higher objective rank.

Study 3. We set out to collect a sample of approximately 50 participants in each condition, after accounting for participants who fail attention check questions. A total of 151 MTurk participants completed the study of which 3 were removed for duplicate IP address and 26 for failing either of the two attention check questions. Results remain the same when all participants are included in the analyses. The final sample consisted of 123 participants with 63 in the control condition and 60 in the momentum condition ($M_{age}=34.45$ years, 44.72% females).

Measures. In Study 2, since both threat measures showed similar results, we only measured subjective threat perceptions in this study. We asked participants two questions, 1) how threatened they felt by TAG Heuer that it may move ahead of them in brand rankings the following year (1 = *not at all*; 7 = *extremely*) and 2) how confident they were that TAG Heuer will eat into their (OMEGA) consumer market share, the following year (1= 0% *confident*; 10 = 100% *confident*). The two items were standardized and combined to create a composite measure

of threat ($\alpha=.66$). Similar to Study 2, expectations were measured by asking participants to indicate the rank they expect Tag Heuer to achieve in next year's rankings by selecting any option between rank 1 and 10. However, unlike Study 2, expectations were measured before participants responded to the threat items.

Study 4. In advance of data collection, we decided to recruit approximately 100 participants for each condition. We pre-registered our study at aspredicted.org, discussing our sample size, study design and expected results (<http://aspredicted.org/blind.php?x=ey9ux6>). A total of 302 MTurk participants attempted our study of which 24 were excluded for failing the attention check question. Results remain unchanged if we include participants who failed the attention check questions. Our final sample consisted of 278 participants ($M_{age}=37.37$ years, 57.19% females).

Momentum and control condition were similar to Study 2. In the doubtful momentum condition, the wording was identical to the momentum condition, though, participants additionally read:

However, it came to your knowledge that past performance data of certain managers had various clerical errors, drawing concerns to the reliability of the data. This list included Josh among others. You were not part of the mix-up, hence your past performance data is accurate.

Following this, participants read that this year the competition is to suggest ideas that can help reduce paper waste in the company. They also learned that Josh is competing, along with other managers from across the company.

Measures. The two main dependent variables were threat perception and expectation of competitor's success. Two items captured participants subjective threat perceptions – 1) “*In anticipation for this year's ranking, how threatened do you feel that Josh may move ahead of you in this year's rankings*” on a 9-point scale (1 = *not at all threatening* and 9 = *extremely threatening*) and 2) “*in your opinion, how confident are you that*

Josh will move ahead of you in this year's competition” The responses for the two items were standardized to create the composite threat variable ($\alpha=.74$). Similar to the previous two studies, expectations was captured by asking participants “what rank do you expect Josh to have at the conclusion of this year's competition”.

Study 5. We pre-registered the study protocol along with information on sample size and exclusion criteria. Since the study involved taking note of competitor’s rank it was important for us to exclude participants who did not pay attention to theirs’ or the competitor’s rank (our manipulation of momentum). We also pre-registered to remove participants with duplicate geo locations in line with recent findings that suggest some participants use masked IP addresses to participate in the same study multiple times¹. A total of 1302 MTurk participants completed the study. Majority of these participants contained unique geolocations ($n = 1066$) but there were some observation with same geo coordinates repeated multiple times. We removed 54 such observations that contained similar geo codes three or more times. This criteria resulted in exclusions of workers beyond three-sigma deviation. We also removed three participants with duplicate IP addresses and 173 for failing any of the three attention check questions. Our final sample consisted of 1072 participants ($M_{age}=35.65$ years, 53.87% females).

Measures. Consistent with previous studies, participants responded to 3 items assessing threat – 1) “*In anticipation of the competition, how threatened are you that Participant 107 may move ahead of you in ranking and thereby deny you an opportunity to earn the extra 3 dollars?*” on a seven-point scale (1 = not at all, 7 = extremely), 2) “*how confident are you that participant 107 will move ahead of you in the next round of rankings*” on an 11 point scale (0 = 0% confident, 10 = 100% confident), and 3) “*What is the likelihood that Participant 107 will move*

¹ https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3233954

ahead of you in the next round of rankings?”, on an 11 point scale (0 = 0% likelihood, 10 = 100% likelihood). These two measures were standardized to create the composite threat variable ($\alpha = .83$). Future expectation was captured by the following item, “*what rank do you expect Participant 107 to have at the conclusion of round 4*”, with options ranging from rank 1 to 10.

Results. Here we present one-tailed t-test for mean differences in threat and rank expectations as per the preregistration. A one-tailed t-test revealed significant lower threat for participants in momentum condition who were given the opportunity to affirm ($M = .02$, $SD = 1.98$) in comparison to those in the momentum condition who did not have the option to affirm ($M = .61$, $SD = 1.95$), $t(529) = 3.46$, $p < .001$. Additionally, self-threat reported in the former cell was significantly higher than participants in the no-momentum condition, irrespective of whether they had the chance to affirm, $t(526) = 2.31$, $p = .01$, or not $t(533) = 1.73$, $p = .04$. These results suggest that although self-affirmation was successful in buffering threat caused by opponent momentum, perceived self-threat was still greater in the momentum condition than in the no-momentum condition. This demonstrates the influence of opponent momentum in eliciting self-threat.

Similar analysis with future rank expectations revealed that opponent with momentum was expected to achieve lower rank when participants had a chance to affirm ($M = 2.96$, $SD = 1.53$) compared to when they did not, ($M = 2.54$, $SD = 1.40$), $t(529) = 3.30$, $p < .001$. However, the future rank expected in the former cell was higher than the one reported in the no-momentum condition when participants affirmed themselves, $t(526) = 1.97$, $p = .03$ and was borderline significant when participants did not affirm, $t(533) = 1.65$, $p = .05$. Overall, the above analysis reveals that self-affirmation attenuated the influence of competitor momentum in causing self-threat.

Study S1

The study was performed to replicate Study 5 results by using a slightly different manipulation of self-affirmation.

Sample. We aimed to collect about 100 participants in each condition to ensure we had a sufficient number of participants that remained after removing those participants who failed the attention check. Since the study involved taking note of competitor's rank it was important for us to exclude participants who did not pay attention to theirs' or the competitor's rank (our manipulation of momentum). We find identical results if we include participants who failed the attention check questions. A total of 390 participants completed the study, of these 3 were removed for having duplicate IP addresses and 82 for failing any of the four attention check questions. Our final sample consisted of 305 participants ($M_{age}=39.28$ years, 52.96% females).

Measures. Participants responded to 2 items assessing threat – 1) “in anticipation of the final result, how threatened are you that participant 107 may move ahead of you in final rankings and thereby deny you an opportunity to earn the extra 3 dollars”, 2) “how confident are you that participant 107 will move ahead of you in the next round of rankings”. These two measures were standardized to create the composite threat variable ($\alpha=.65$). Future expectation was captured by the following item, “what rank do you expect participant 107 to have at the conclusion of round 4”, with options ranging from rank 1 to 10.

Procedure. The study had a 2 (momentum: yes, no) \times 2 (self-affirmation: yes, no) between subjects design similar to Study 5. The procedure of the study was identical to Study 5 such that participants took part in a simulated competition. The only difference was in the way participants were given the opportunity to self-affirm after round 3. In the affirmation condition, participants wrote briefly about their core strengths that helped them perform well in the past. This affirmation manipulation was intended to help boost the global self-worth of an individual

by increasing the pool of psychological resources needed to assuage threats to the self.

Participants in the no self-affirmation condition wrote about core strengths of the competitor they were paired with that may have helped him/her to perform well in the last three rounds of the competition. Following this, participants reported their perception of threat and future rank expectation of the competitor.

Results. A two-way ANOVA revealed a main effect of momentum $F(1, 301) = 13.81, p < .001, \eta^2 = .04$, and a significant main effect of affirmation $F(1, 301) = 14.14, p < .001, \eta^2 = .05$, such that participants felt greater threat in the momentum and no-affirmation condition respectively. However, and more importantly, a significant interaction between momentum and affirmation condition on threat perceptions was observed, $F(1, 301) = 6.85, p = .009, \eta^2 = .02$. In decomposing this interaction, we find that participants expressed maximum threat when the competitor had momentum and participants were not offered the opportunity to self-affirm ($M = 1.18, SD = 2.21$). This value was significantly different from the other three conditions where participants were either in the momentum condition but affirmed, $F(1, 301) = 20.30, p < .001, (M = -0.29, SD = 2.34)$ or in the non-momentum condition with an opportunity to affirm, $F(1, 301) = 28.41, p < .001, (M = -0.55, SD = 1.84)$ or non-momentum condition without an opportunity to affirm, $F(1, 301) = 19.24, p < .001, (M = -0.28, SD = 1.59)$. However, no significant difference was observed among the latter three cells, highlighting that self-affirmation helped in reducing the impact of competitor's positive momentum. In short, self-affirmation buffered the impact of self-threat caused by the competitor's momentum. Figure S9 depicts the interaction pattern, emphasizing that participants did not feel threatened by competitor's momentum when given an opportunity to affirm.

A two-way ANOVA on competitor's future rank expectation revealed a significant main effects of momentum $F(1, 301)=64.47, p<.001, \eta^2=.19$, no main effect of affirmation $F(1, 301)=1.79, p=.18, \eta^2=.006$ and a significant interaction of the two $F(1, 301)=8.12, p=.005, \eta^2=.03$. Similar to threat, interaction pattern revealed that participants in the positive momentum condition without self-affirmation expected their competitor to do significantly better in the next round ($M = 2.41, SD = 0.95$) than those in the momentum but afforded an opportunity to self-affirm ($M = 2.86, SD = 1.26$), $F(1,301) = 8.76, p = .003$. Further, participants' expectations were also significantly higher than those in the control condition irrespective of participants being offered an opportunity to affirm ($M = 3.42, SD = 0.77$), $F(1,301) = 44.60, p < .001$ or not ($M = 3.58, SD = 0.69$), $F(1,301) = 56.76, p < .001$. Figure S10 illustrates the above interaction demonstrating that affirmation does not yield a significant change in expectations across positive momentum and control conditions, however when faced with a competitor having positive momentum with no opportunity to self-affirm, participants expected the competitor to achieve a much better rank in the next round.

We also performed the bootstrap analysis for a first stage moderated mediation design, such that affirmation moderated the link between momentum condition and expectation. The resulting analysis with 5000 iterations revealed a positive and significant effect of momentum in comparison to control condition on threat via expectations under no affirmation ($b=1.08, p<.001, 95\% \text{ CI } [.76, 1.47]$). We also found a positive effect of momentum on threat via expectations when participants were given the opportunity to affirm but of lower magnitude ($b=.51, p=.002, 95\% \text{ CI } [.21, .87]$). However, and more importantly, the difference in the two conditional effects was positive and significant, such that participants felt more threatened in the absence of affirmation than when given the opportunity to affirm ($b=.56, p=.007, 95\% \text{ CI } [.18, 1.01]$).

To summarize, the results from this study replicated the findings from Study 5 and provide further evidence of self-threat caused by competitor's positive momentum in a simulated competition. These results in combination with other studies offer further robustness to our theory and hypotheses.

Table S1: Results of multinomial logit regression analysis for Study 1 on game outcome

	GAME DRAWN			GAME WON	
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 6</i>
Opponent's Momentum	-0.191 (0.289)		0.102 (0.345)	-7.838*** (0.116)	-2.605*** (0.134)
Player's own Momentum		2.435*** (0.336)	2.454*** (0.337)		2.186*** (0.138)
Rank Difference		3.896*** (0.0223)	3.897*** (0.0223)		7.924*** (0.0110)
Total number of moves		0.0263*** (0.0000626)	0.0263*** (0.0000626)		-0.000166*** (0.0000296)
Chess piece color		0.0458*** (0.00468)	0.0458*** (0.00468)		0.156*** (0.00194)
Event rated ^a		1.724*** (0.00692)	1.724*** (0.00692)		0.000658 (0.00489)
Year ^b		0.0268*** (0.00467)	0.0268*** (0.00467)		0.000119 (0.00194)
Constant	-2.366*** (0.00216)	-4.631*** (0.00697)	-4.631*** (0.00697)	-0.00628*** (0.000896)	-0.0356*** (0.00248)
<i>N</i>	5221220	5221220	5221220	5221220	5221220

Notes. ^a 1 = Game was rated by FICS, 2 = Game was unrated by FICS; ^b 1 = 2015, 2 = 2016; Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table S2: Results of multilevel logit regression analysis for Study 6 on probability of winning the match

	PROBABILITY OF WINNING			
	Model 1	Model 2	Model 3	Model 4
Opponent's Momentum	-.196*** (.033)	-.192*** (.034)		-0.152*** (0.0344)
Player's own Momentum		.093* (.037)	.015 (.038)	.042 (.038)
Rank Difference		.218*** (.004)	.219*** (.004)	.219*** (.004)
Gender ^a			.144 (.297)	.145 (.297)
Player's Age			-.014*** (.002)	-.014*** (.002)
Opponent's Age			.015*** (.002)	.014*** (.002)
Player's Service Hand			-.108*** (.015)	-.108*** (.015)
Opponent's Service Hand			.103*** (.015)	.103*** (.015)
Surface Type				
---Clay			-.015 (.026)	-.015 (.026)
---Grass			-.006 (.031)	-.006 (.031)
---Hard			-.003 (.026)	-.001 (.026)
Best of 3 or 5 Sets ^b			.123 (.296)	.124 (.296)
Series type fixed effects			Included	Included
Draw size fixed effects			Included	Included
Year fixed effects	Included	Included	Included	Included
Cut1	.013 (.037)	-.108** (.038)	-.082 (.161)	-.105 (.161)
Level 2 variance	3.35e-08	9.97e-09	8.16e-10	0.00000185
<i>N</i>	117762	117744	117746	117744
<i>AIC</i>	163264.8	157712.1	157527.2	157506.1
<i>BIC</i>	163535.7	158002.4	158107.8	158096.3
<i>Log likelihood</i>	-81604.4	-78826.0	-78703.6	-78692.0
<i>Degrees of freedom</i>	27	29	59	60

Notes: a 1=Male (ATP), 2=Female (WTP); b 1= best of 3 sets, 2 = best of 5 sets, Standard errors in parentheses
* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table S3: Results of panel regression analysis for Study 6 on net games won and threat

	NET GAMES WON				THREAT			
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6	Model 7	Model 8
Opponent's Momentum	-0.0380*** (0.00545)	-0.0402*** (0.0117)		-0.0340** (0.0115)	0.0798*** (0.0215)	0.0814*** (0.0217)		0.0789*** (0.0221)
Player's own Momentum		0.0235* (0.0107)	0.0146 (0.0103)	0.0186 (0.0102)		-0.0637* (0.0278)	-0.0801** (0.0269)	-0.0827** (0.0270)
Rank Difference		0.00177*** (0.00047)	0.00176*** (0.00047)	0.00175*** (0.00047)		-0.00062* (0.00029)	-0.00063* (0.00029)	-0.00062* (0.00029)
Gender _a			-0.0461 (0.0579)	-0.0459 (0.0581)			-0.179 (0.297)	-0.181 (0.296)
Player's Age			-0.00175*** (0.00048)	-0.00172*** (0.00048)			-0.00385* (0.00193)	-0.00390* (0.00192)
Opponent's Age			0.00210*** (0.000479)	0.00187*** (0.000490)			0.000324 (0.00145)	0.000838 (0.00144)
Player's Service Hand			-0.0315*** (0.00519)	-0.0316*** (0.00521)			-0.0348** (0.0130)	-0.0349** (0.0130)
Opponent's Service Hand			0.0311*** (0.00511)	0.0309*** (0.00507)			0.0215 (0.0132)	0.0215 (0.0132)
Surface Type								
----Clay			-0.00037 (0.00067)	-0.00025 (0.00067)			-0.0353** (0.0128)	-0.0355** (0.0127)
----Grass			0.00067 (0.00098)	0.00063 (0.00095)			-0.0109 (0.0169)	-0.0108 (0.0169)
----Hard			-0.00025 (0.0006)	0.00018 (0.0006)			-0.0172 (0.0143)	-0.0180 (0.0142)
Best of 3 or 5 Sets _b			-0.0452 (0.0581)	-0.0453 (0.0583)			-0.146 (0.294)	-0.149 (0.293)
Series type fixed effects			Included	Included			Included	Included
Draw size fixed effects			Included	Included			Included	Included
Constant	-0.0006 (0.0001)	0.0010 (0.0005)	-0.0053 (0.00279)	0.0001 (0.00219)	1.047*** (0.0047)	1.046*** (0.0049)	1.161*** (0.0349)	1.149*** (0.0352)
<i>N</i>	117762	117746	117750	117746	82477	82477	82477	82477
Degrees of freedom	1	3	26	26	1	3	26	26

Notes: _a 1=Male (ATP), 2=Female (WTP); _b 1= best of 3 sets, 2 = best of 5 sets, Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table S4: Results of logit regression analysis for Study 6 on probability of winning the match

	MATCH WON		
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>
Opponent's Momentum	-0.109*** (0.0281)		-0.159** (0.0585)
Player's own Momentum		-0.128** (0.0422)	-0.118** (0.0432)
Rank Difference		0.286*** (0.0241)	0.273*** (0.0233)
Gender ^a		0.173 (0.289)	0.147 (0.287)
Player's Age		-0.0140*** (0.00172)	-0.0147*** (0.00171)
Opponent's Age		0.0146*** (0.00166)	0.0141*** (0.00169)
Player's Service Hand		-0.0945*** (0.0154)	-0.0989*** (0.0154)
Opponent's Service Hand		0.0713*** (0.0153)	0.0889*** (0.0152)
Surface Type			
----Clay		-0.0228 (0.0262)	-0.0205 (0.0262)
----Grass		-0.0116 (0.0314)	-0.0107 (0.0314)
----Hard		-0.00414 (0.0256)	-0.00634 (0.0256)
Best of 3 or 5 Sets ^b		0.143 (0.287)	0.127 (0.286)
Series type fixed effects		Included	Included
Draw size fixed effects		Included	Included
Year fixed effects		Included	Included
Constant	-0.0137 (0.0369)	0.167 (0.161)	0.166 (0.161)
<i>N</i>	117756	117746	117746

Notes: a 1=Male (ATP), 2=Female (WTP); b 1= best of 3 sets, 2 = best of 5 sets, Standard errors in parentheses
 * $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

Table S5: Results of panel regression analysis for Study 4 on net games won and threat after controlling for minutes

	NET GAMES WON				THREAT	
	<i>Model 1</i>	<i>Model 2</i>	<i>Model 3</i>	<i>Model 4</i>	<i>Model 5</i>	<i>Model 6</i>
Opponent's Momentum	-0.0155* (0.00707)		-0.0145* (0.00706)	0.0112* (0.00530)		0.0115* (0.00512)
Player's own Momentum		0.0909*** (0.0274)	0.0908*** (0.0274)		-0.0920* (0.0408)	-0.0919* (0.0407)
Rank Difference		0.00251*** (0.000249)	0.00252*** (0.000249)		-0.000802* (0.000382)	-0.000812* (0.000381)
Minutes		-0.00674*** (0.000123)	-0.00674*** (0.000123)		0.000683*** (0.000161)	0.000683*** (0.000161)
Player's Age		-0.00638*** (0.00119)	-0.00638*** (0.00119)		-0.00175 (0.00346)	-0.00175 (0.00345)
Opponent's Age		0.00881*** (0.00117)	0.00871*** (0.00117)		-0.00233 (0.00209)	-0.00225 (0.00209)
Player's Service Hand		0.0221 (0.0116)	0.0220 (0.0116)		-0.0799*** (0.0218)	-0.0798*** (0.0218)
Opponent's Service Hand		0.00452 (0.0116)	0.00455 (0.0116)		0.0470* (0.0189)	0.0470* (0.0189)
Surface Type						
----Clay		0.0978*** (0.0169)	0.0981*** (0.0169)		-0.0611*** (0.0177)	-0.0613*** (0.0178)
----Grass		-0.0449* (0.0207)	-0.0447* (0.0207)		-0.0210 (0.0251)	-0.0212 (0.0251)
----Hard		0.0227 (0.0166)	0.0231 (0.0166)		-0.0379 (0.0203)	-0.0382 (0.0203)
Best of 3 or 5 Sets ^a		0.295 (0.516)	0.296 (0.516)		0.431 (0.891)	0.431 (0.891)
Series type fixed effects		Included	Included		Included	Included
Draw size fixed effects		Included	Included		Included	Included
Constant	1.254*** (0.00408)	1.803*** (0.111)	1.806*** (0.111)	1.456*** (0.00806)	1.574*** (0.0594)	1.572*** (0.0593)
<i>N</i>	67122	62323	62323	64566	62277	62277

Notes: a 1= best of 3 sets, 2 = best of 5 sets, Standard errors in parentheses

* $p < 0.05$, ** $p < 0.01$, *** $p < 0.001$

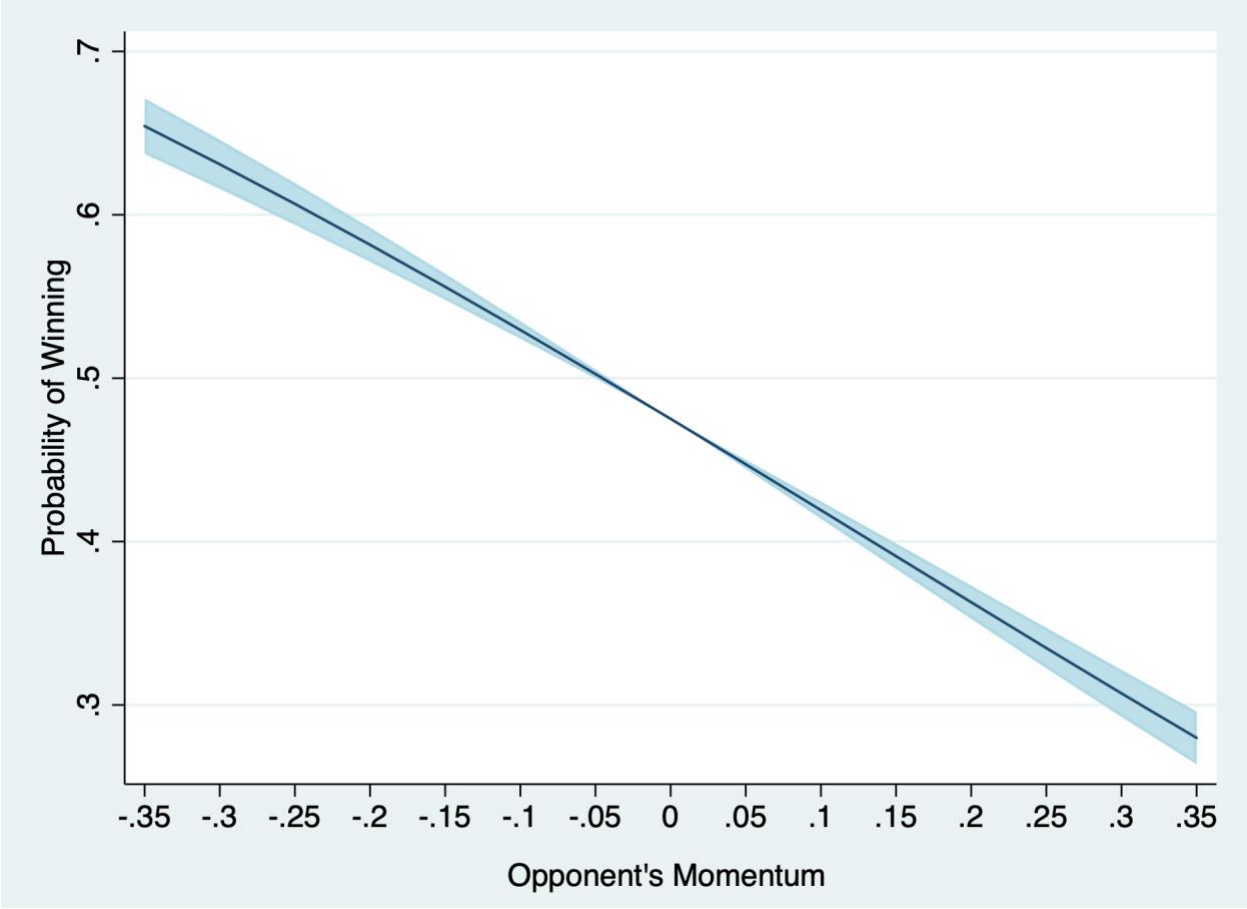


Figure S1: Focal actor’s probability of winning a chess game as a function of opponent’s momentum after controlling for focal actor’s own momentum, current rank differences and year fixed effects.

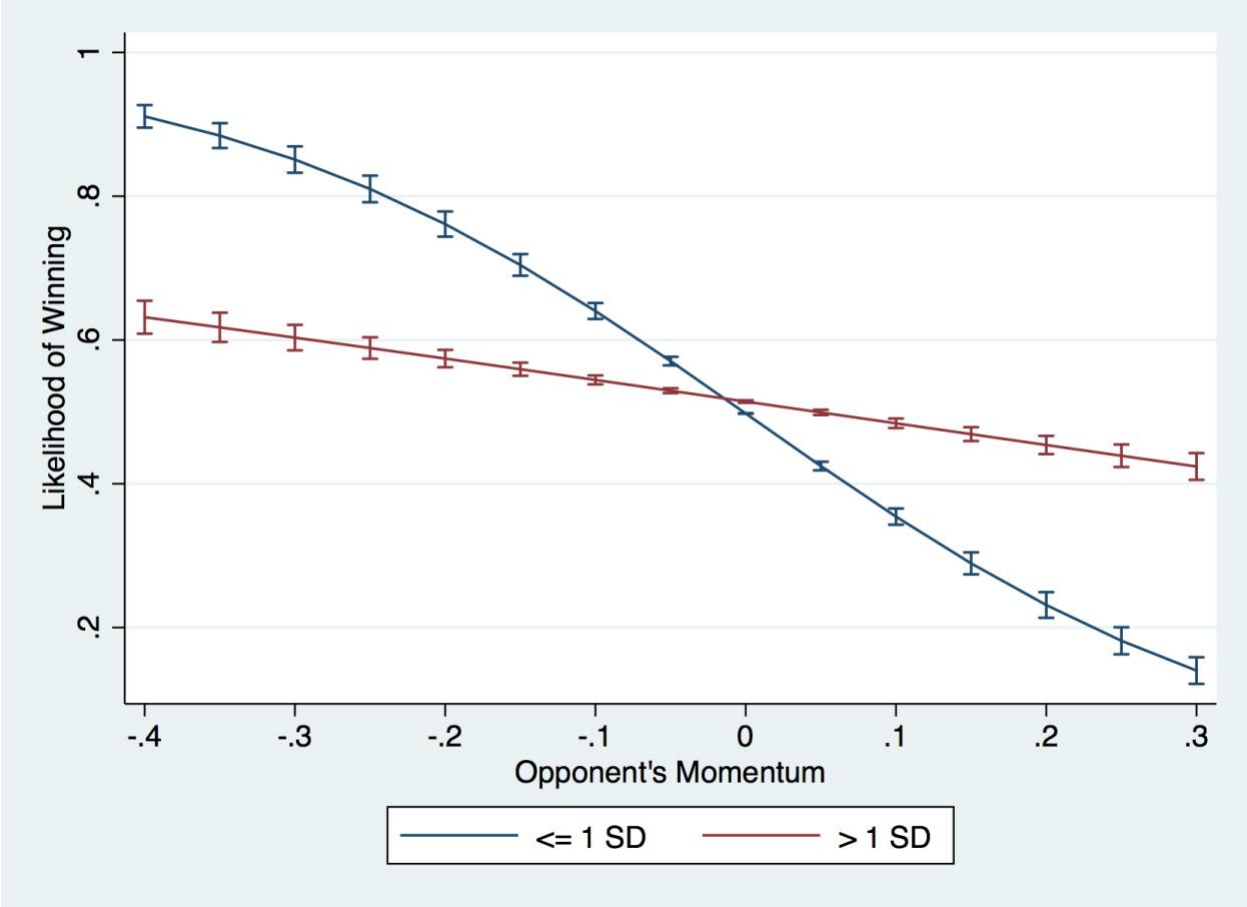


Figure S2: Interaction effect of opponent's momentum and momentum shift on focal actor's probability of winning a chess game

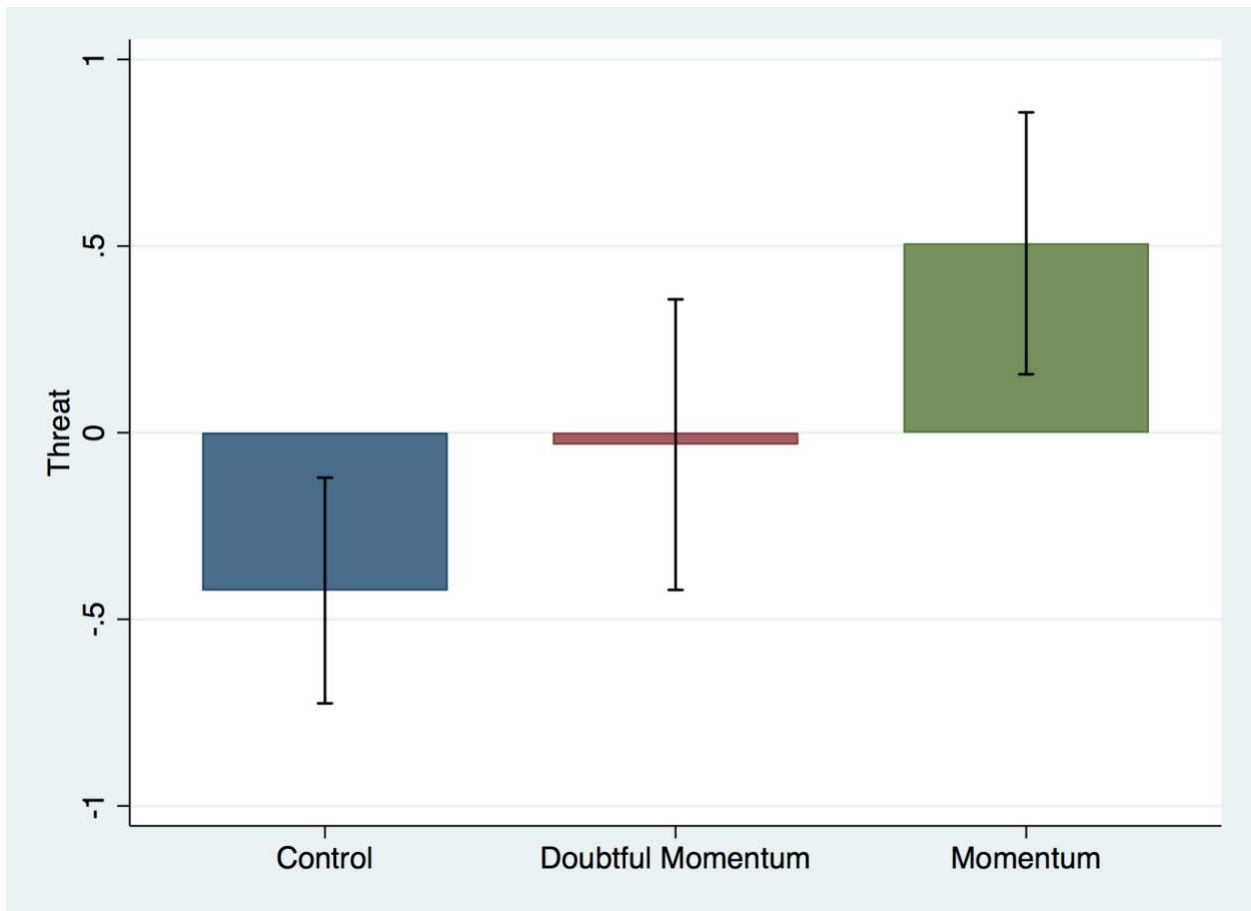


Figure S3: Threat perceptions reported by participants in Study 4

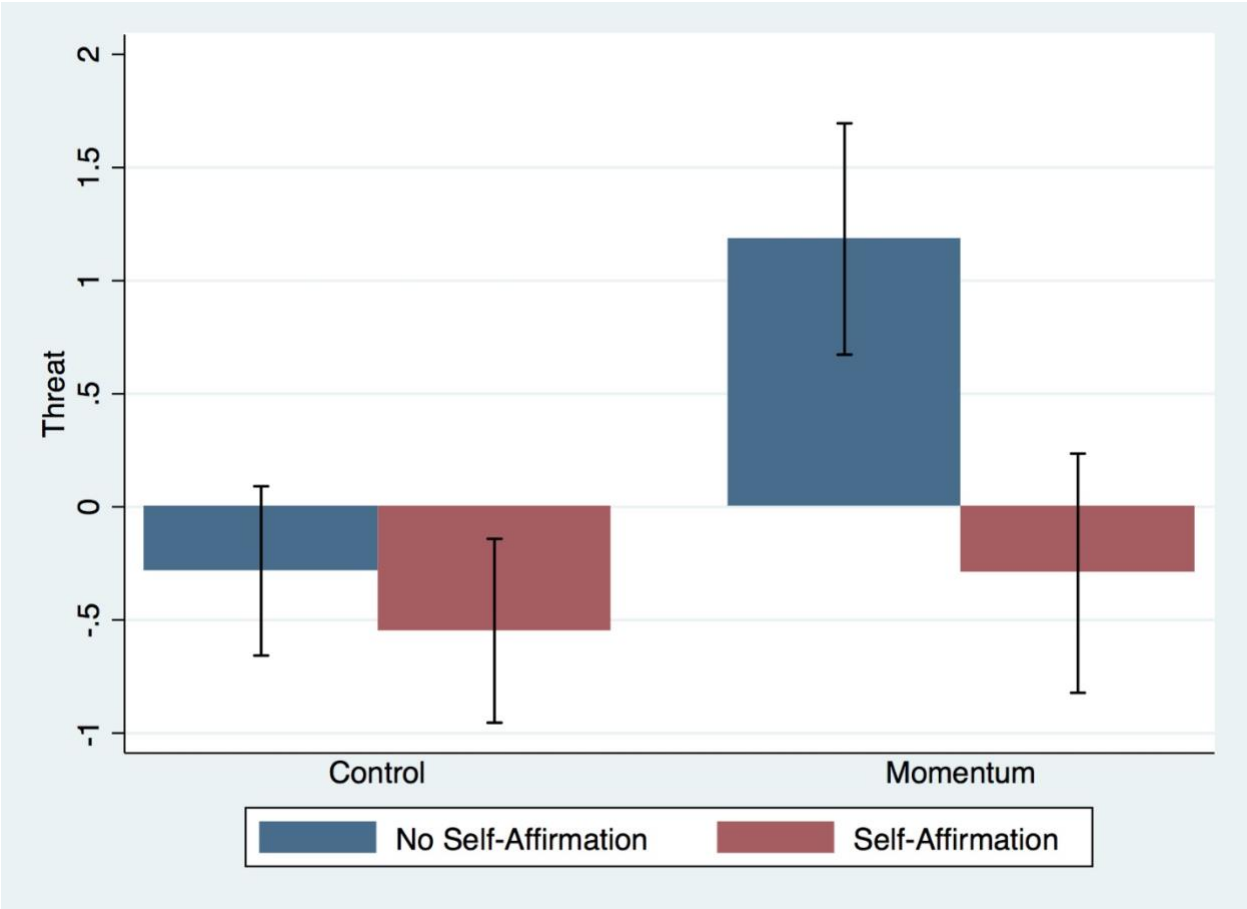


Figure S4: Threat perceptions reported by participants in Study 5

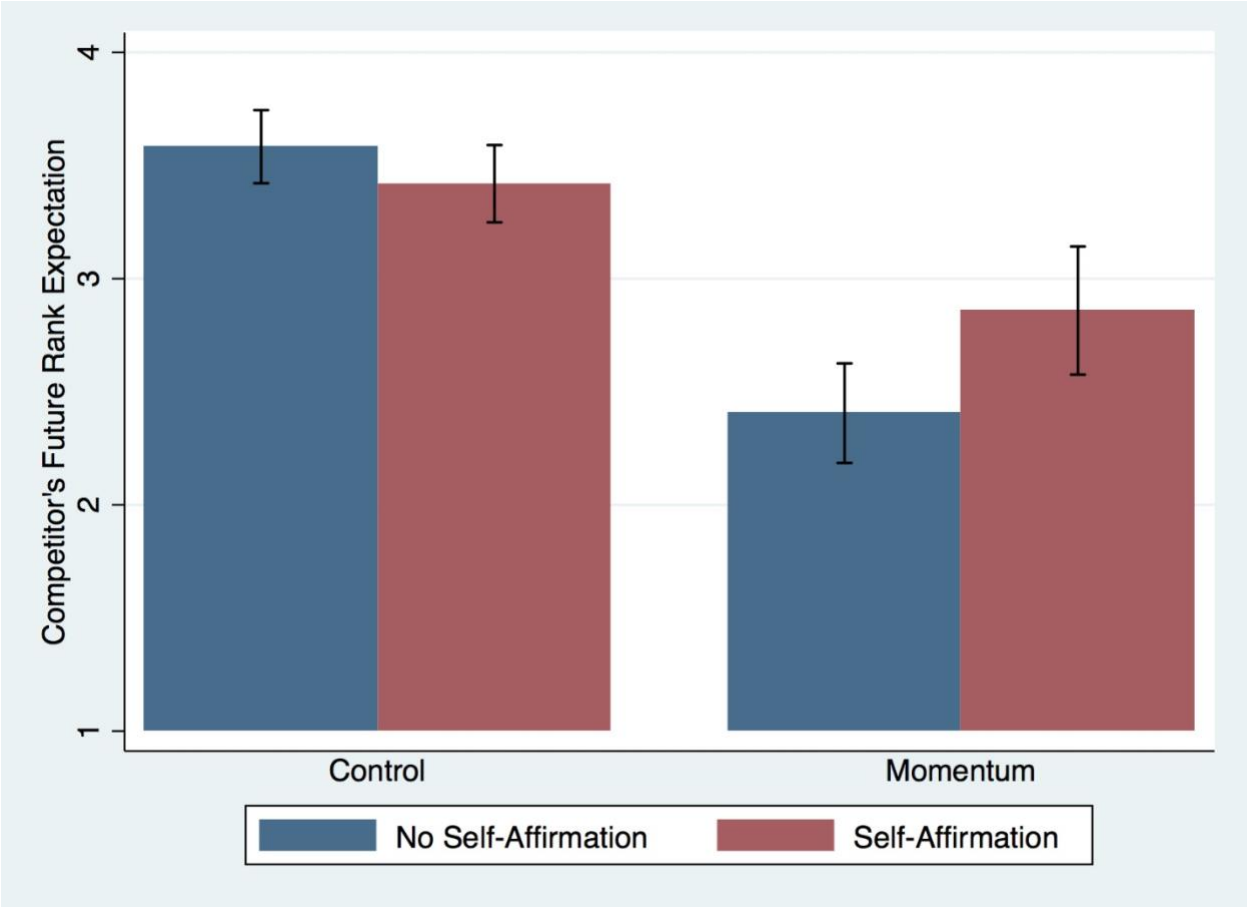


Figure S5: Future rank expectation reported by participants in Study 5

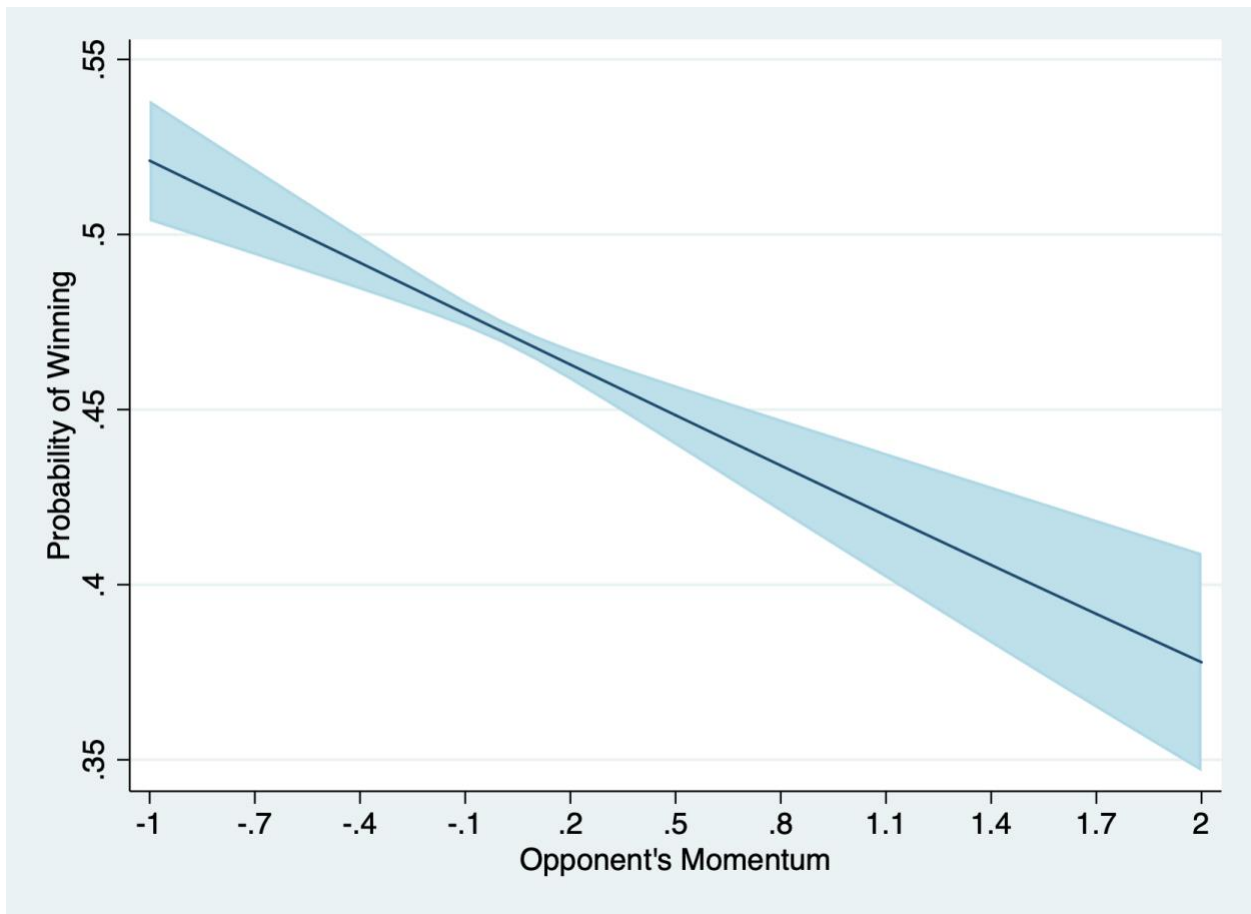


Figure S6: Focal actor's probability of winning a tennis match as a function of opponent's momentum after controlling for focal actor's own momentum, current rank differences and year fixed effects.

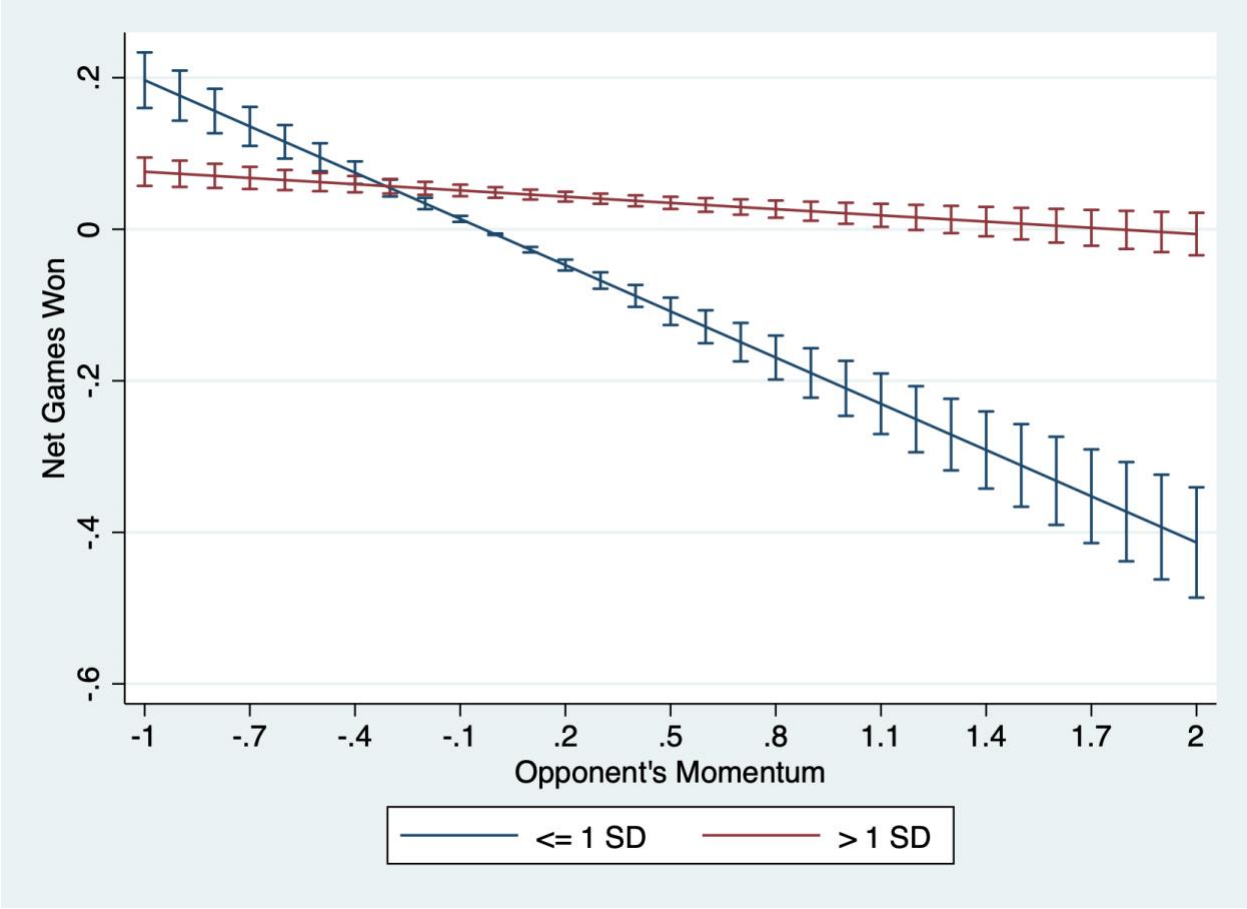


Figure S7: Interaction effect of opponent’s momentum and momentum shift on net games won in Study 6

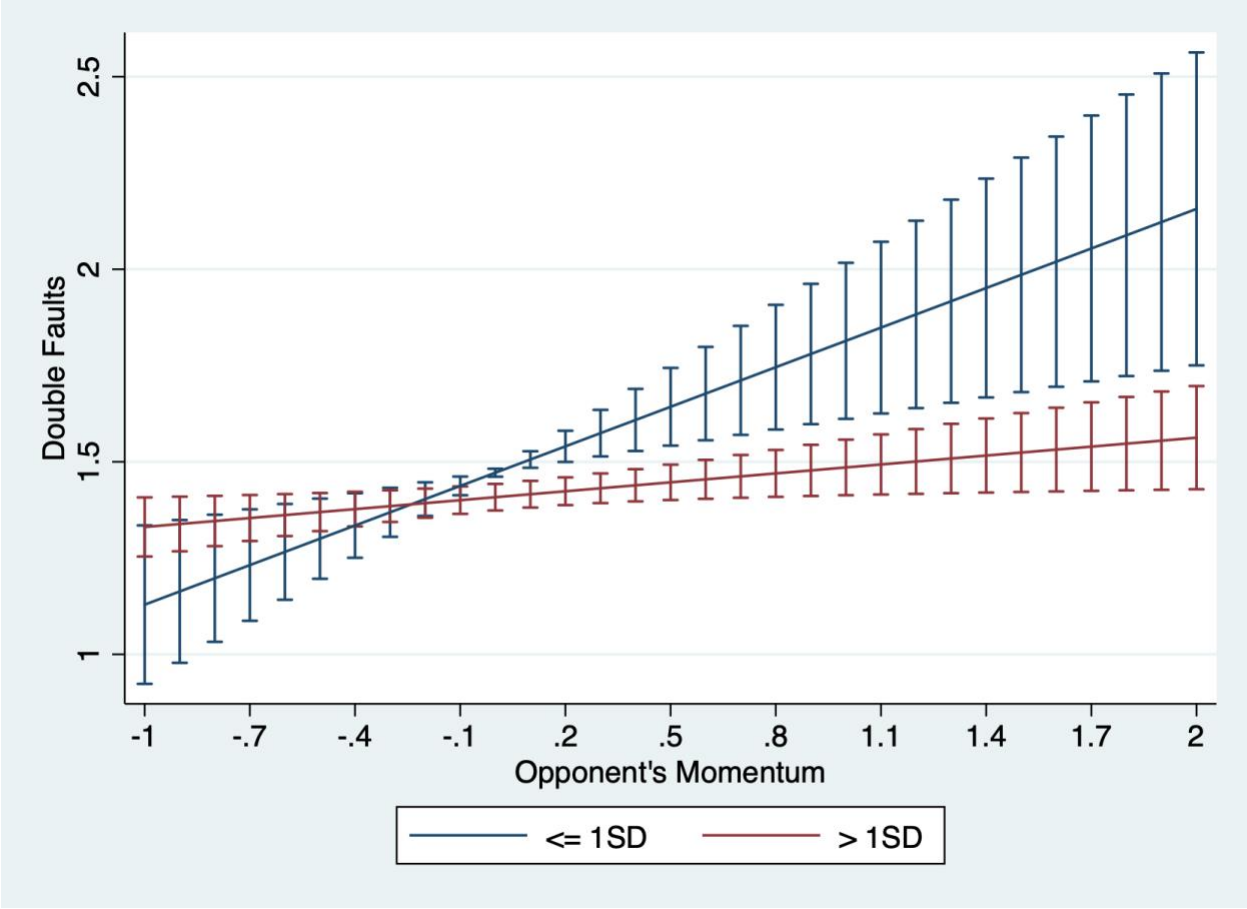


Figure S8: Interaction effect of opponent's momentum and momentum shift on number of double faults committed by focal player in Study 6

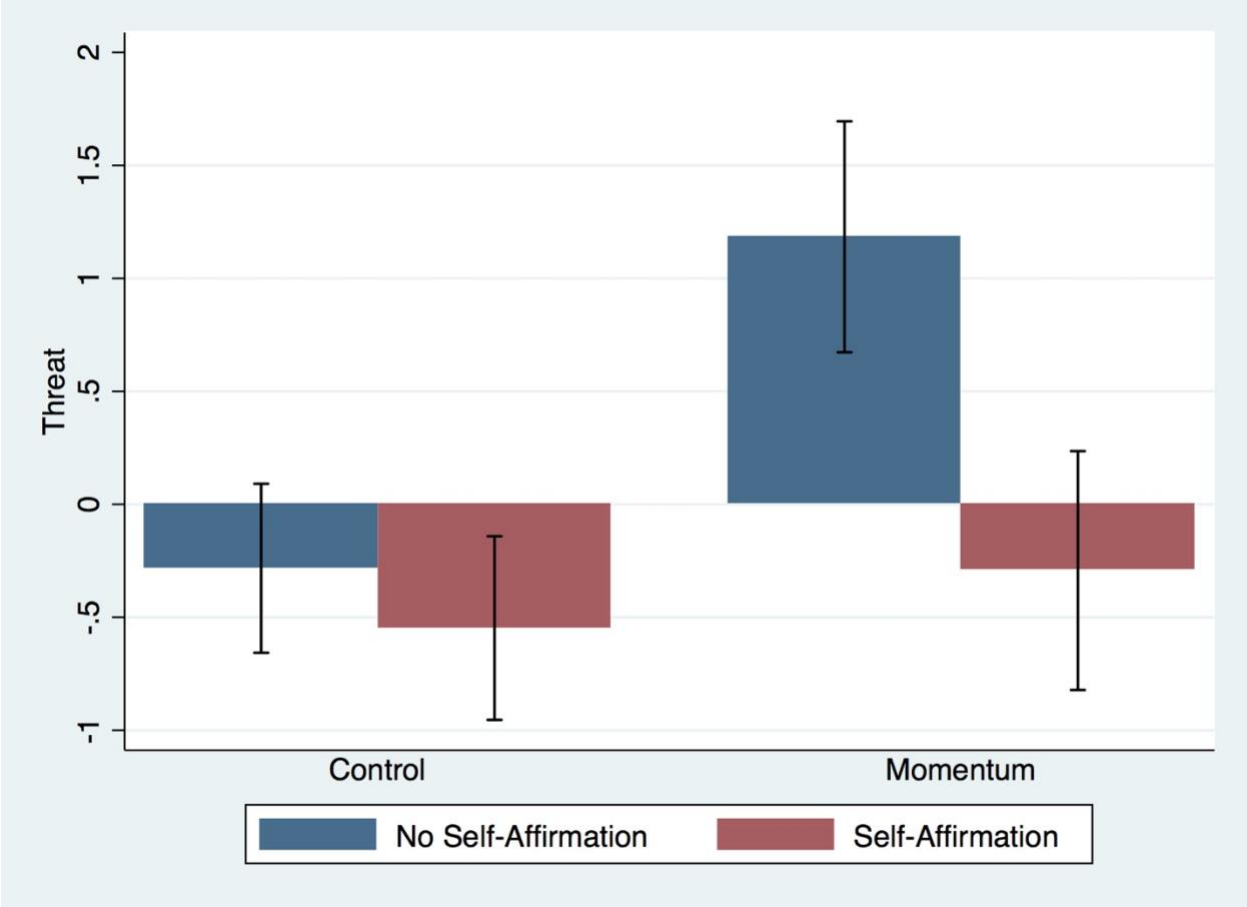


Figure S9: Threat perceptions reported by participants in Study S1

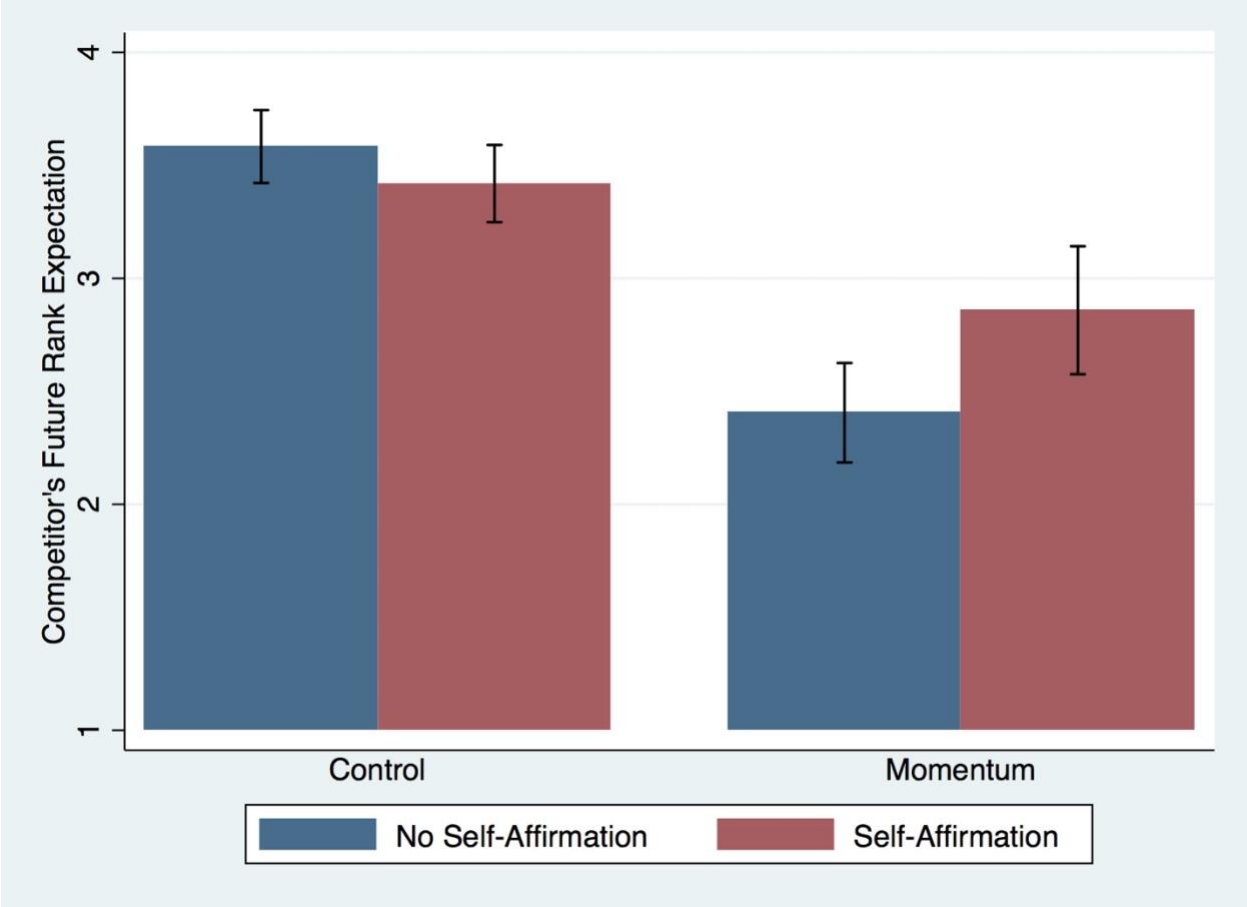


Figure S10: Future rank expectation reported by participants in Study S1