

TABLES

Table 1: Panel Estimation: Changes in Exit and Victory Rates, Former Peers of Mentioned Pilots

Panel A: Exit Rates							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
Mention period	1.164*** (0.045)	1.162*** (0.045)	1.155*** (0.045)	1.152*** (0.044)	1.212*** (0.047)	1.177*** (0.046)	
Former peer gets mentioned			1.775*** (0.334)	1.709*** (0.321)	1.774*** (0.350)	1.920*** (0.385)	1.752*** (0.338)
Ever peer of mentioned pilots		0.513*** (0.030)	0.505*** (0.030)	0.499*** (0.029)	0.605*** (0.036)	0.449*** (0.030)	0.530*** (0.038)
<i>N</i>	80759	80759	80759	80759	80759	80759	80759
<i>Aircraft type</i>	N	N	N	N	Y	Y	Y
<i>Pilot quality</i>	N	N	N	Y	Y	Y	Y
<i>Eastern front</i>	N	N	N	N	Y	Y	Y
<i>Pilot FE</i>	N	N	N	N	N	N	N
<i>Squadron FE</i>	N	N	N	N	N	Y	Y
<i>Time FE</i>	N	N	N	N	N	N	Y

Panel B: Victory Rates						
	(1)	(2)	(3)	(4)	(5)	(6)
Mention period	0.253*** (0.024)	0.244*** (0.023)	0.244*** (0.023)	0.256*** (0.025)	0.251*** (0.025)	
Former peer gets mentioned		0.478*** (0.138)	0.472*** (0.138)	0.422*** (0.139)	0.402*** (0.140)	0.384*** (0.125)
<i>N</i>	80044	80044	80044	80044	80022	80022
<i>R</i> ²	0.199	0.199	0.199	0.212	0.226	0.252
<i>Aircraft type</i>	N	N	N	Y	Y	Y
<i>Pilot quality</i>	N	N	Y	Y	Y	Y
<i>Eastern front</i>	N	N	N	Y	Y	Y
<i>Experience</i>	N	N	N	Y	Y	Y
<i>Pilot FE</i>	Y	Y	Y	Y	Y	Y
<i>Squadron FE</i>	N	N	N	N	Y	Y
<i>Time FE</i>	N	N	N	N	N	Y

Note: This table reports the estimated effects of having a former peer getting mentioned on monthly exit rates (Panel A) and victory rates (Panel B). The estimates are based on Equation 1 for exit rates and Equation 2 for victory rates. We use the whole sample for the period of September 1939 to April 1945. Panel A displays hazard ratios from Cox regressions as exponentiated coefficients. A hazard ratio of 1.775 in Panel A, column 2, implies a 77.5% increase in the risk of exit. Panel B is based on fixed effect models. A coefficient of 0.478 in Panel B, column 2, implies an increase of 0.478 extra victories in a month. Our fixed effect model drops singleton observations. Standard errors are virtually unchanged if singletons are kept. *Former peer gets mentioned* is a dummy indicating that a former peer, i.e., a pilot who in the past (but not at the moment of the mention) served in the same squadron (*Staffel*), gets mentioned. *Mention period* is a dummy to control for months in which any pilot gets mention. *Ever peer of mentioned pilots* is a dummy indicating whether the pilot ever flies with a peer that gets mentioned at any point of the War. We add this control in Panel A because we cannot include pilot fixed effects in a Cox specification. Starting with column 4 in Panel A (and column 3 in Panel B) controls for pilot quality are included. Pilot quality is calculated as a pilot's cumulative victories before period t divided by his experience. Experience is the number of months of wartime service since the start of World War II, beginning with the first victory claim in our records (except for veterans of the Spanish Civil War, for whom we add months of service there after the first victory claim). Eastern front is a dummy for pilots serving there. In some columns we additionally include controls for experience, fixed effects for the month of the observation, and fixed effects for the aircraft type or the squadron of the pilot. Standard errors in parentheses are clustered at the level of the squadron (*Staffel*). * $p < .1$, ** $p < .05$, *** $p < .01$.

Table 2: Balancedness Table: Placebo vs. Actually Mentioned Pilots

Variable	(1) Placebo		(2) Mention		(3) T-test Difference
	N	Mean/SE	N	Mean/SE	(1)-(2)
Victories in (placebo) mention period ($t = 0$)	348	10.417 (0.375)	72	7.972 (0.873)	2.444***
Victories in $t = -1$	348	6.736 (0.260)	72	5.847 (0.768)	0.888
Victories in $t = -2$	348	4.675 (0.263)	72	4.389 (0.625)	0.286
Victories in $t = -3$	348	3.756 (0.242)	72	3.694 (0.716)	0.061
Pilot quality	348	2.743 (0.097)	72	2.027 (0.154)	0.716***
Eastern front	348	0.434 (0.027)	72	0.444 (0.059)	-0.011
Cumulative victories in $t = 0$	348	67.032 (2.497)	72	67.333 (5.485)	-0.302
Other pilots mentioned in $t = 0$	348	0.822 (0.021)	72	0.806 (0.047)	0.016

Note: This table shows the balancedness of the variables used for the CEM match and other important variables across mentioned and placebo pilots. The first two columns display the averages and standard errors for placebo (column 1) and mentioned (column 2) pilots. Column 3 displays the difference between columns 1 and 2 and the t-test. All rates are calculated per month. Robust standard errors in parentheses. * $p < .1$, ** $p < .05$, *** $p < .01$.

Table 3: Difference-in-Differences Estimates: Changes in Exit and Victory Rates, Peers of Actually-mentioned vs. Placebo-mentioned Pilots

Panel A: Exit Rates		
	(1) All periods	(2) +/-6 Window
Post \times Former peer gets mentioned	2.126*** (0.388)	2.883*** (0.670)
<i>N</i>	98875	23142
<i>Mean exit rates</i>	0.014	0.021
<i>Treatment group FE</i>	Y	Y
<i>Event time FE</i>	Y	Y
Panel B: Victory Rates		
	(1) All periods	(2) +/-6 Window
Post \times Former peer gets mentioned	0.464*** (0.099)	0.313** (0.143)
<i>N</i>	98875	23117
<i>R</i> ²	0.166	0.321
<i>Mean vic rates</i>	0.858	0.939
<i>Pilot FE</i>	Y	Y
<i>Event FE</i>	Y	Y
<i>Event time FE</i>	Y	Y

Note: This table shows the difference-in-differences estimates for exit rates (Panel A) and victory rates (Panel B) based on Equation 4. For exit rates, the results are based on a Cox proportional hazard model and we display hazard ratios as exponentiated coefficients. A hazard ratio of 2.126 in column 1 implies a 112.6% increase in the risk of exit per month. For victory rates, the results are estimated using OLS. Column 1 estimates the effect without restricting to +/- 6 months around the mention period. This sample is larger than our panel from Table 1 because the same pilot-month can be included in multiple events if a pilot has more than one former peer that gets (placebo-)mentioned. Column 2 focuses on a sample of six months before and six months after the mention (or placebo-mention). The variable *Post \times Former peer gets mentioned* captures the interaction of *post*, a dummy for periods after the (placebo-) mention, and the variable *former peer gets mentioned* that indicates whether the former peer of the pilot receives an actual or a placebo mention. To ease interpretation, we provide the mean exit and victory rates in the sample. Appendix Table A.5 reproduces the results of Panel A estimated with OLS instead. Appendix Table A.6 reproduces this table but clusters by the (placebo-)mentioned peer. Standard errors in parenthesis are clustered at the level of the squadron (*Staffel*). * $p < .1$, ** $p < .05$, *** $p < .01$.

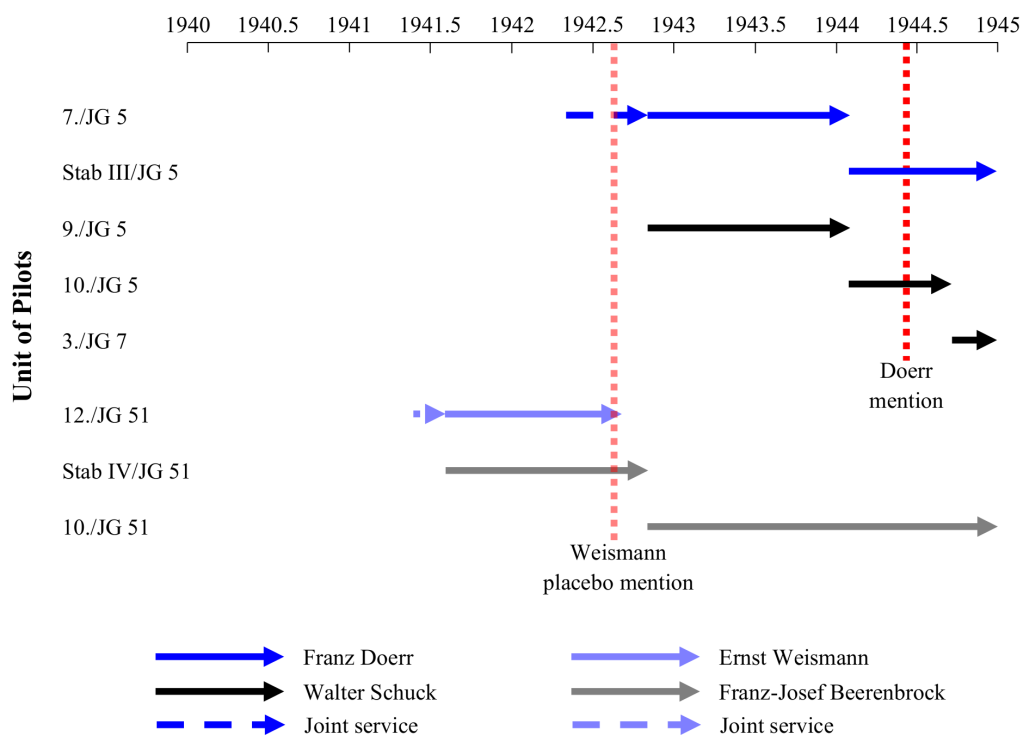
Table 4: Difference-in-Differences Estimates by Pilot Quality

Panel A: Exit Rates		
	(1) Bottom 80%	(2) Top 20%
Post \times Former peer gets mentioned	2.642*** (0.705)	1.820 (1.044)
<i>N</i>	72365	15909
<i>Mean exit rates</i>	0.010	0.012
<i>Treatment group FE</i>	Y	Y
<i>Event time FE</i>	Y	Y
Panel B: Victory Rates		
	(1) Bottom 80%	(2) Top 20%
Post \times Former peer gets mentioned	0.234*** (0.070)	1.011*** (0.342)
<i>N</i>	72364	15907
<i>R</i> ²	0.158	0.099
<i>Mean vic rates</i>	0.500	2.414
<i>Pilot FE</i>	Y	Y
<i>Event FE</i>	Y	Y
<i>Event time FE</i>	Y	Y

Note: This table presents the difference-in-differences estimates based on Equation 4 by pilot quality. Pilot quality is calculated as a pilot's cumulative victories before period t divided by his experience. Panel A shows the results for exit rates for the bottom 80% of pilots in the quality distribution (column 1) and the top 20% (column 2). Panel B shows the results for victory rates using the same quality split as Panel A. The sample splits are determined by taking the pilot quality measured six months before the (placebo-) mention. We use the specification of Table 3, column 1 for exits and victories. The variable *Post \times Former peer gets mentioned* captures the interaction of *post*, a dummy for periods after the (placebo-) mention, and the variable *former peer gets mentioned* that indicates whether the former peer of the pilot receives an actual or a placebo mention. To ease interpretation, we provide the mean exit and victory rates in the sample. Appendix Table A.8 reproduces this table but clusters on the level of the mentioned (or placebo-mentioned) peer. Appendix Table A.9 reproduces the results with alternative quality splits. Standard errors in parentheses are clustered at the level of the squadron (*Staffel*). * $p < .1$, ** $p < .05$, *** $p < .01$.

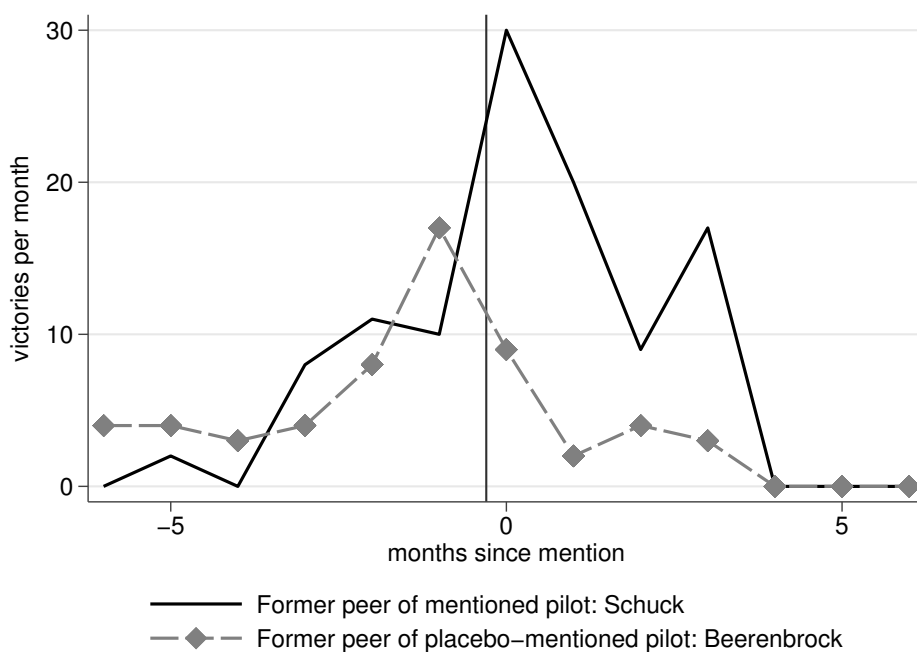
FIGURES

Figure 1: Identification Strategy

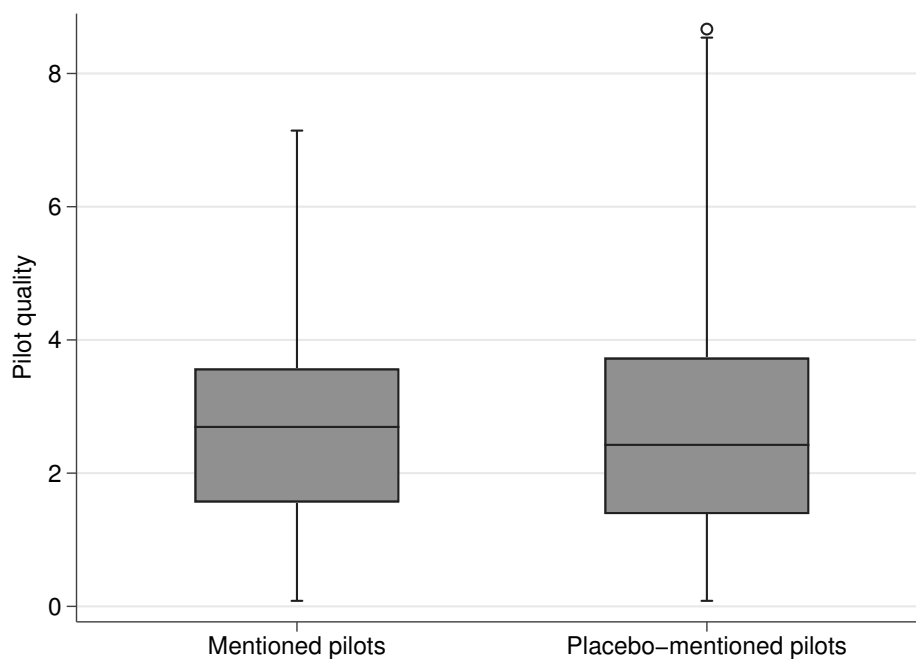
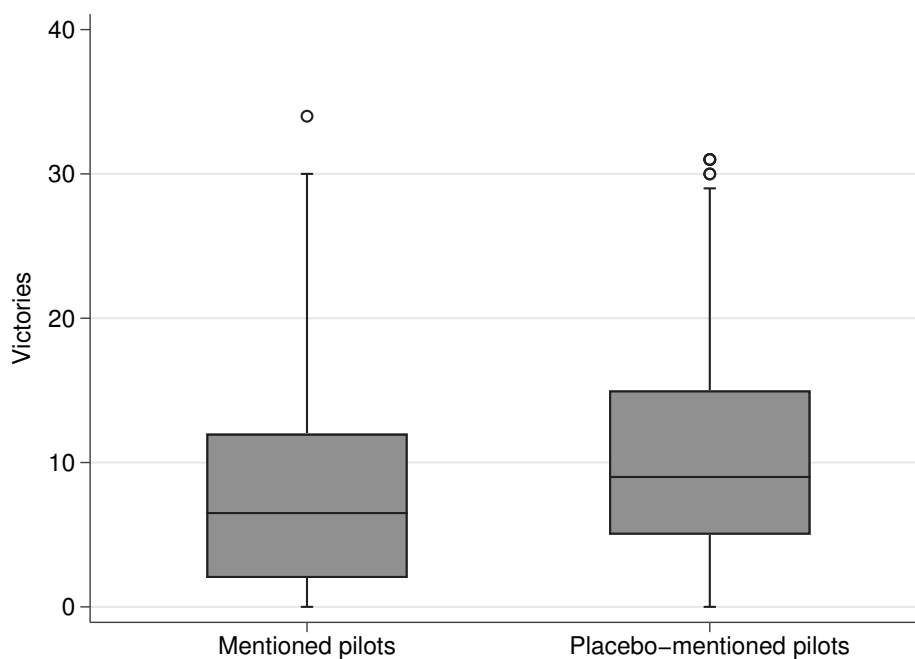


Note: The red dashed lines indicate mentions in the Wehrmachtbericht for Franz Doerr and a placebo-mention for Ernst Weissman. The top part of the figure shows service of Franz Doerr and Walter Schuck. The blue dashed lines indicates joint service. Doerr and Schuck served together in 7/JG 5 from May 1942 to October 1942. Schuck then transferred to 9/JG 5, 10/JG 5 and finally 3/JG 7. Doerr stayed in 7/JG 5 until July 1944 and then transferred to Stab III/JG 5. The bottom part of the figure shows service of Ernst Weismann and Franz-Josef Beerenbrock. They served together in 12/JG 51 in June and July 1941. While Weismann continued service in 12/JG 51, Beerenbrock transferred to Stab IV/JG 51 and later to 10/JG 51.

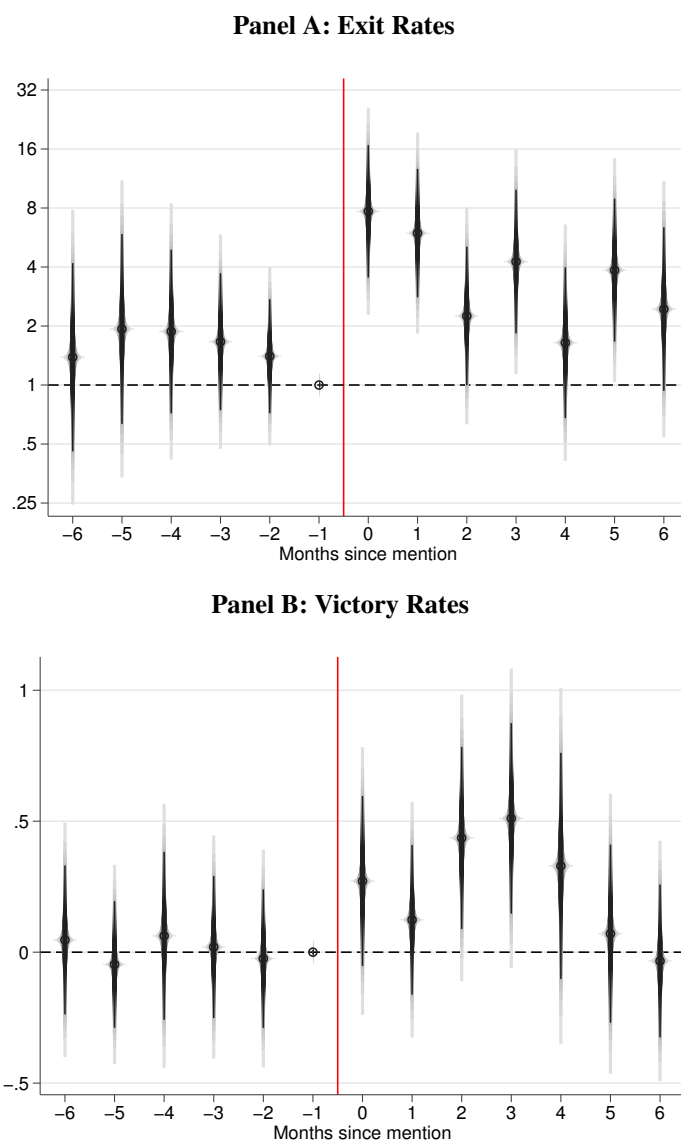
Figure 2: Example of Matched Pilots



Note: This figure shows the trajectory of monthly victories for Schuck and Beerenbrock, the former peers of Doerr and Weismann, for the six months around the (placebo) mention. They have similar monthly victories in the months preceding the (placebo) mention of their former peers, but Schuck scores more victories than Beerenbrock after the mention of his former peer.

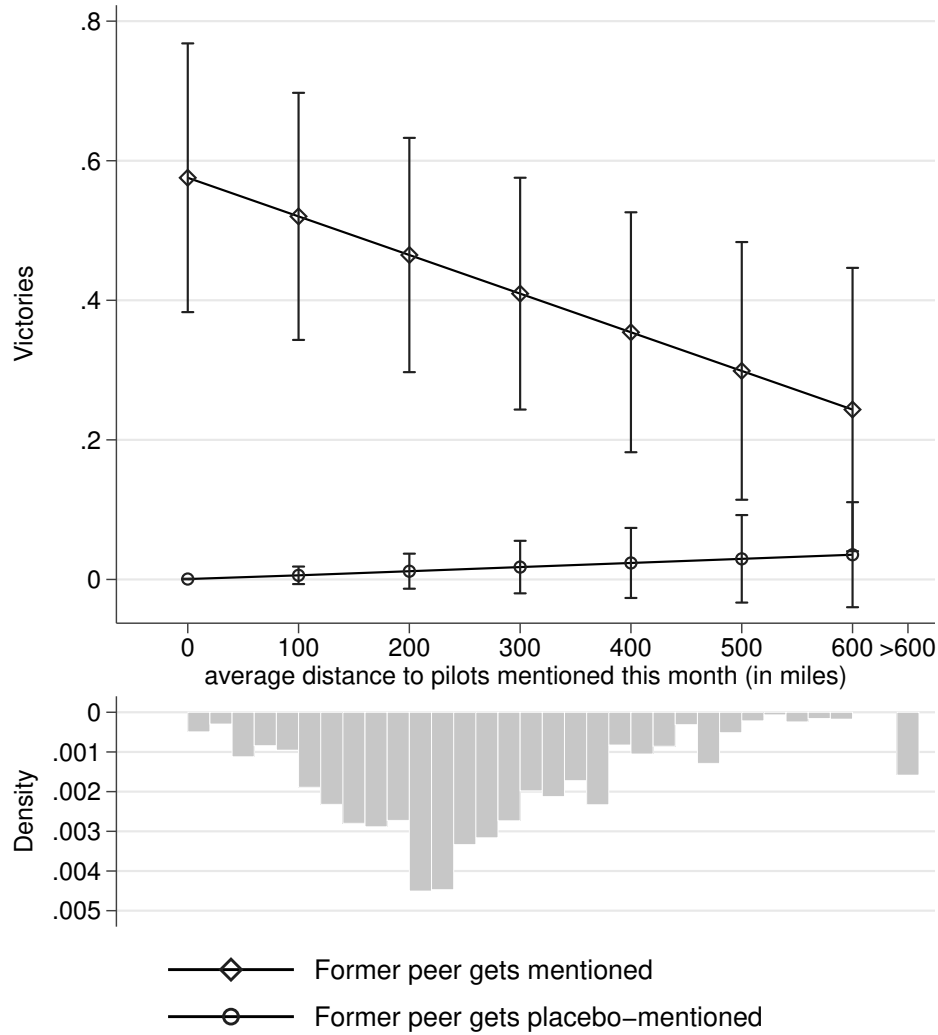
Figure 3: Similarity of Treatment and Control Groups**Panel A: Pilot Quality of Mentioned vs. Placebo-Mentioned Pilots****Panel B: Victories of Mentioned vs. Placebo-Mentioned Pilots**

Note: This figure compares the distribution of pilot quality (Panel A) and victories (Panel B) for actually mentioned pilots and placebo mentioned pilots. The victories of Panel B are measured in the month of the (placebo-)mention. Even though the actually mentioned pilots slightly differ from the matched placebos on mean victories and pilot quality (see Table 2), the entire distributions are very similar. Pilot quality is defined as the cumulative number of victories up to the previous month divided by the number of months served (including months served during the Spanish Civil War). We summarize the distributions with generalized box plots. The dark grey box indicates the 25 and 75 percentile with the median plotted as a vertical line within the box. The whiskers span the 95% interval, and outliers are included as individual dots.

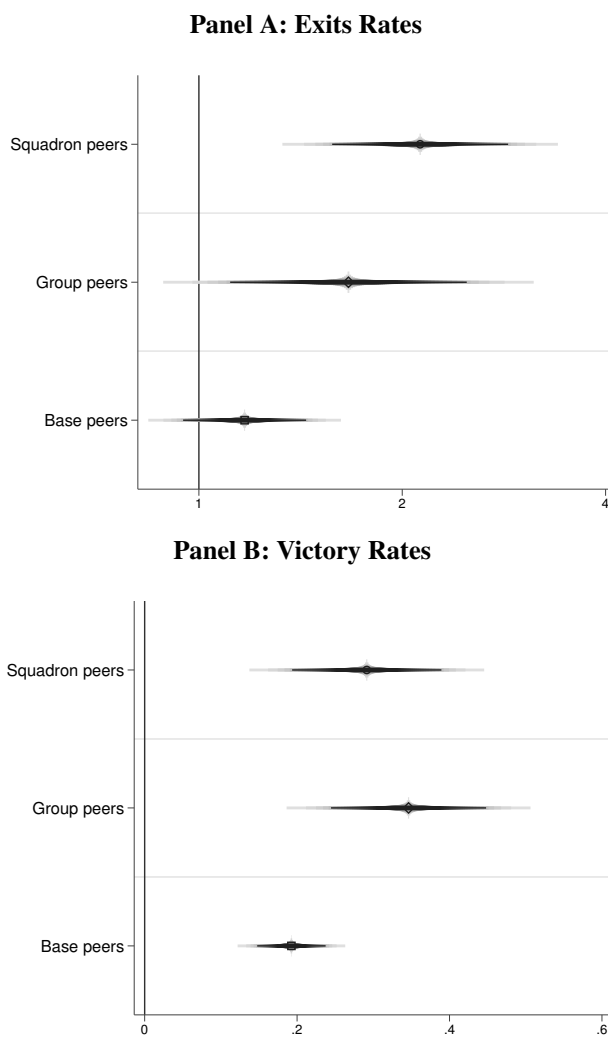
Figure 4: Event Study: Dynamic Effect on Victory and Exit Rates

Note: This figure displays the time-varying coefficients for the event study estimated in Equation 3. We provide 95% confidence intervals in grey and 90% intervals in black. Panel A shows the exponentiated coefficients for the exit rates from the Cox model on a log scale. Panel B shows the coefficients for victory rates estimated with OLS. The coefficients capture the difference in exit (victory) rates of pilots with mentioned vs. placebo-mentioned former peers relative to the difference in the month before the mention (reference month). The specification is estimated in a sample with all periods as in Table 3, column 1. Appendix Figure A.3 replicates the results of Panel A estimated with OLS instead of Cox.

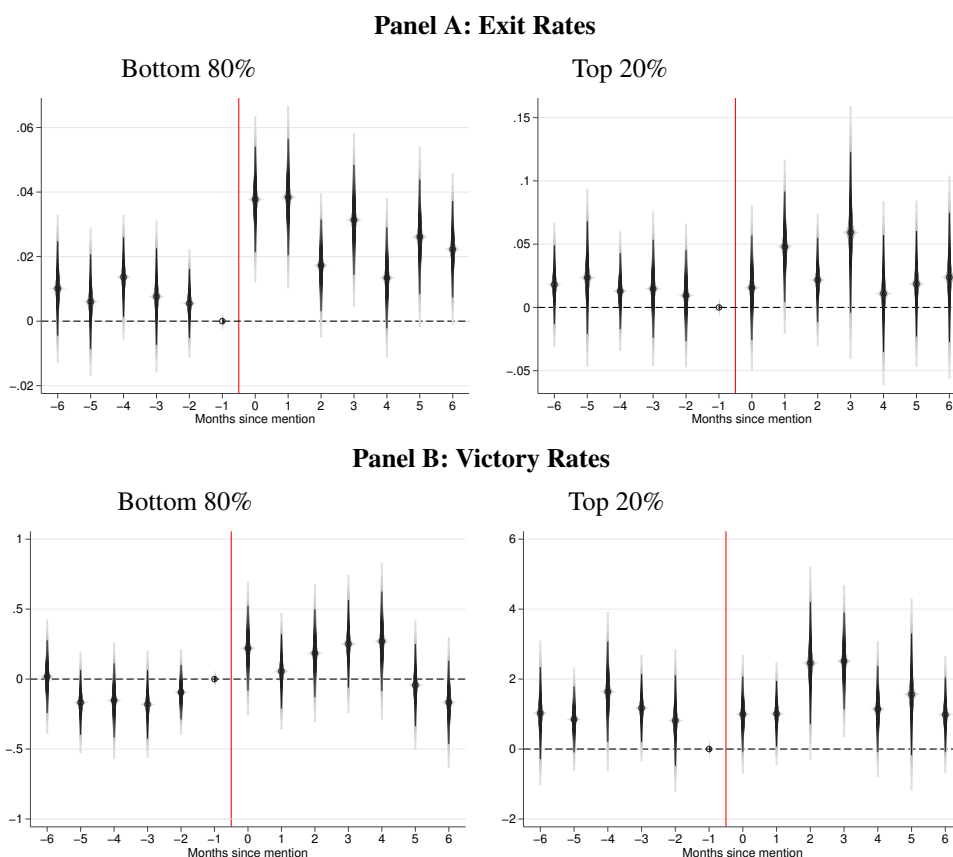
Figure 5: Marginal Peer Effects by Birthplace Distance



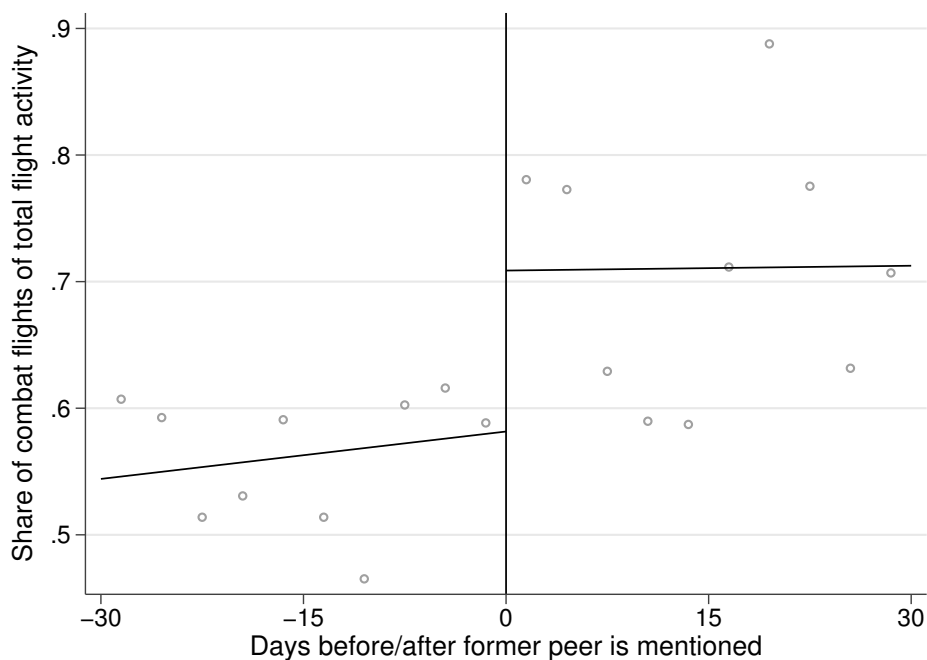
Note: This figure displays a margin-plot for the interaction effect of the distance between birthplaces and our treatment (or placebo-treatment) on the number of monthly victories. We provide 90% confidence intervals. The distance to the birthplace of the mentioned pilot is measured in miles. We always calculate the distance to the pilots that are actually mentioned. Peers of placebo-mentioned pilots have a former peer who gets placebo-mentioned in the same month that another pilot, who is not a former peer, gets actually mentioned. We additionally plot a histogram of the birth distance under the margin plot to contextualize the marginal coefficients. *Former peer gets (placebo-)mentioned* is a dummy indicating that a former peer, i.e., a pilot who in the past (but not at the moment of the mention) served in the same squadron (*Staffel*), gets (placebo-)mentioned. This figure is estimated for the 186 pilots from the CEM sample for which we can compute distances. We build on the specification from Table 3, Panel B, column 1.

Figure 6: Results by Intensity of Past Interaction

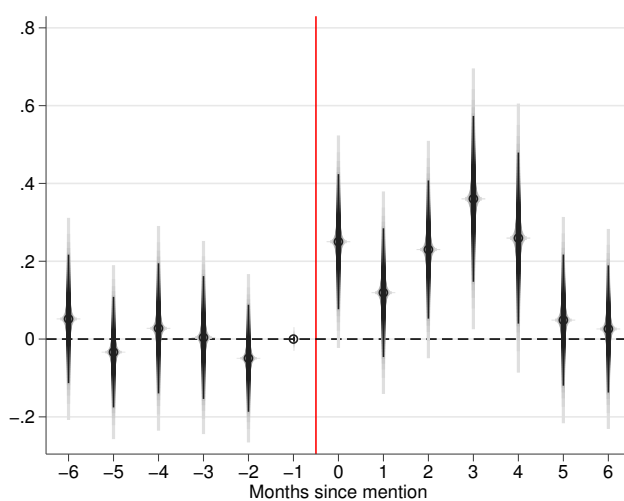
Note: This figure plots the coefficients from difference-in-differences specifications as in Table 3, column 1, with alternative definitions of former peers: pilots who previously served in the same group (group peers) or flew from the same base (base peers) but did not serve in the same squadron. Panel A shows the exponentiated coefficients from the Cox model on a log scale. We provide 95% confidence intervals in grey and 90% intervals in black. The effect on exit rates (Panel A) is largest for squadron peers and smaller, but still positive, for base and group peers. The effect on victories (Panel B) is also positive for all three peer definitions.

Figure 7: Event Studies by Pilot Quality

Note: This figure replicates the results shown in Figure 4 by quality sub samples. We provide 95% confidence intervals in grey and 90% intervals in black. Panel A shows the coefficients on exit rates for the bottom 80% of the quality distribution and the top 20%. Panel B shows the coefficients for victory rates for the same quality split. The sample splits are determined by taking the pilot quality measured six months before the (placebo-) mention. Panel A is based on an OLS specification (as reported in Appendix Table A.5, column 1). We use OLS as the baseline for these sub samples because we cannot compute hazard ratios for periods without exits in either control or treatment group. Appendix Figure A.5 replicates the results of Panel A estimated with Cox instead of OLS.

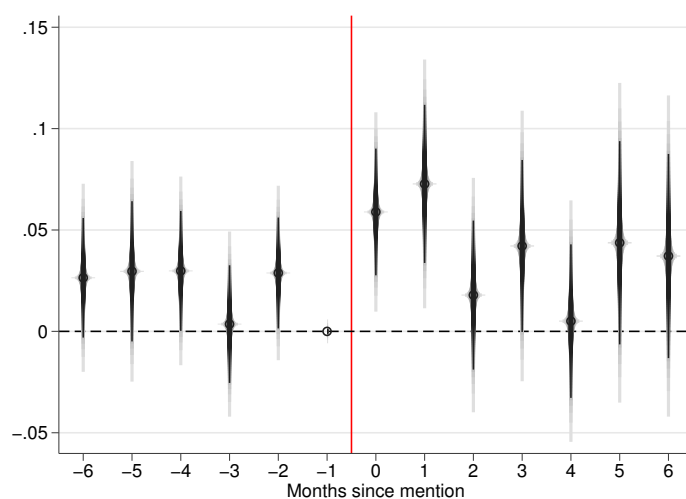
Figure 8: Share of Combat Flights

Note: This figure plots the share of combat flights per day for the 30 days before and after a former peer's mention. The analysis is based on flight log entries for 14 pilots who have former peers that get mentioned. Before the mention, less than 60% of all flights have a combat purpose. After the mention, the share of combat flights is much higher at about 70%.

Figure 9: Event Study, Number of Active Days

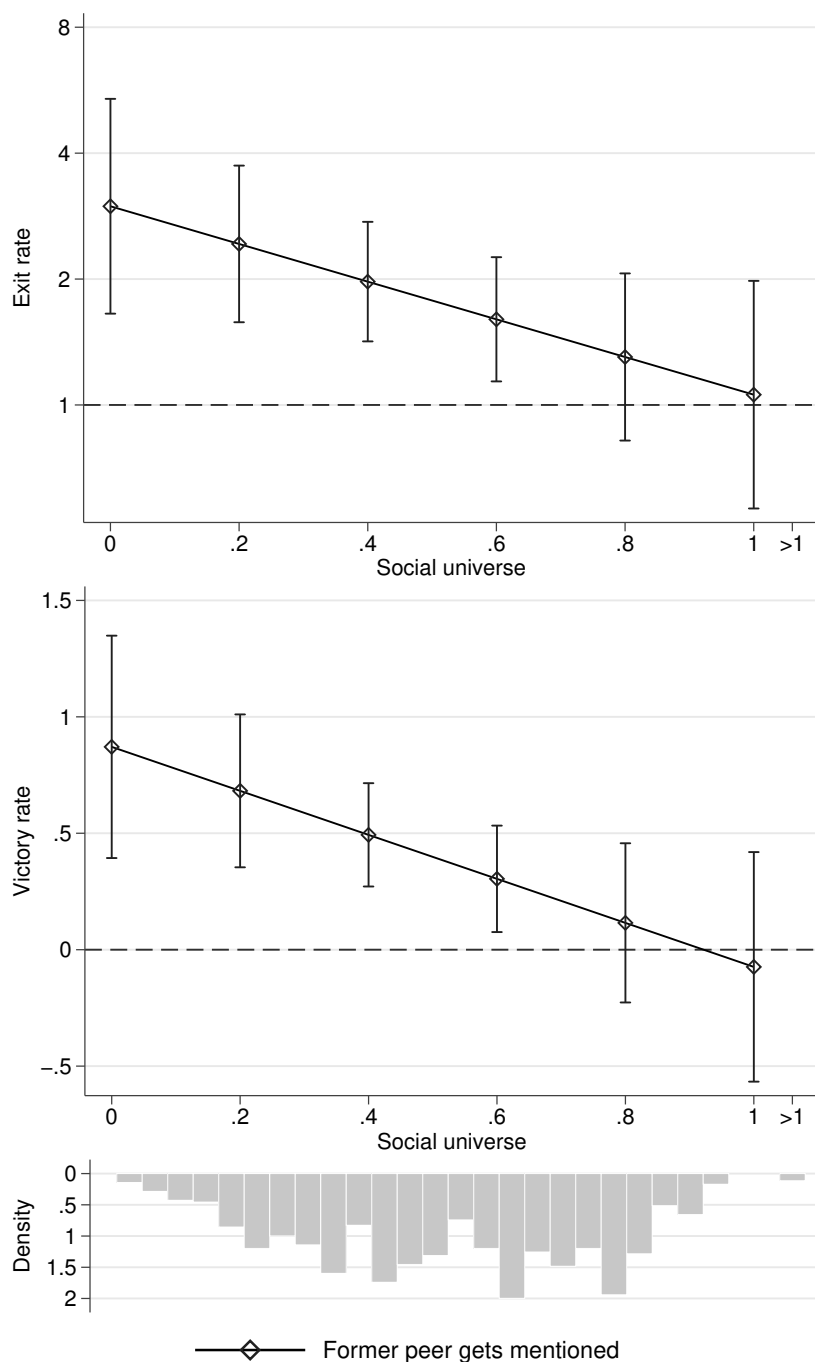
Note: This figure is based on the same specification as Figure 4, Panel B, with a different outcome variable: number of active days, i.e., number of days with at least one victory. We provide 95% confidence intervals in grey and 90% intervals in black.

Figure 10: Event Study, Ratio of Exits to Active Days



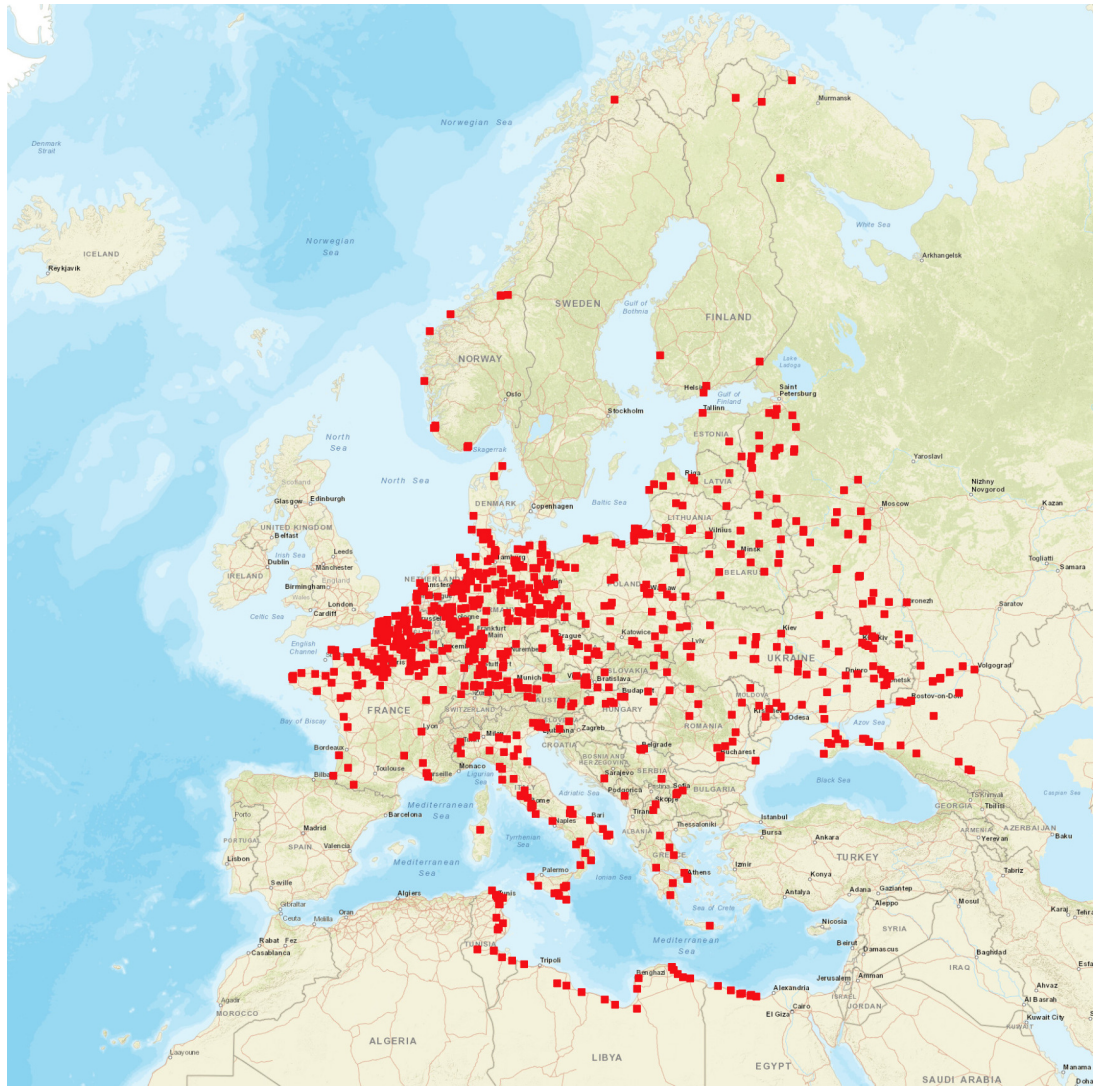
Note: This figure is based on the same specification as Figure 4, Panel B, with a different outcome variable: ratio of exits per active days, where active days are days with at least one victory. The sample only includes months with at least one active day. Otherwise the ratio would be undefined. Results look similar if we replace the ratio with the exit dummy for months without active days. We provide 95% confidence intervals in grey and 90% intervals in black.

Figure 11: Marginal Peer Effects by Shared Social Universe

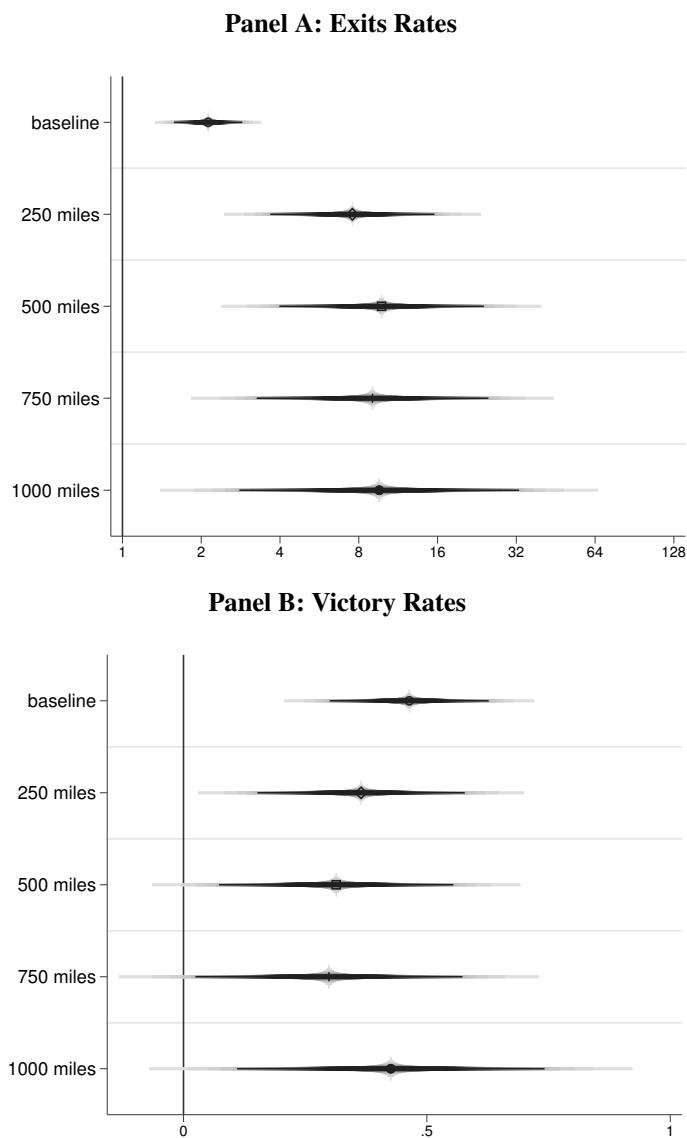


Note: This figure displays margin-plots for the interaction effect of the social universe that a pilot shares with his mentioned peer and our treatment. The top panel estimates the effect on the exit rate and follows the Cox proportional hazard specification from Table 1, Panel A, column 7. The bottom panel estimates the effect on the victory rate and follows the specification from Table 1, Panel B, column 6. We provide 90% confidence intervals. The social universe is defined as the share of peers that a pilot has in common with the mentioned pilot. This variable takes values equal to zero in months when no former peer is mentioned. If multiple peers are mentioned, the shared social universes get added. In a few cases, the resulting social universes get larger than 1. We additionally plot a histogram of the shared social universe under the margin plot to contextualize the marginal coefficients. *Former peer gets (placebo-)mentioned* is a dummy indicating that a former peer, i.e., a pilot who in the past (but not at the moment of the mention) served in the same squadron (*Staffel*), gets (placebo-)mentioned. Standard errors in parentheses are clustered at the level of the squadron (*Staffel*). * $p < .1$, ** $p < .05$, *** $p < .01$.

Figure 12: Airfield Locations of Luftwaffe Squadrons, 1939-1945



Note: This map plots the location of every airfield from which pilots in our data set flew at least once during the period of September 1939 to May 1945.

Figure 13: Correlated Shocks: Results by Base Distance

Note: This figure plots the difference-in-differences effect on exits (Panel A) and victories (Panel B) as a function of the minimum distance between pilots and their (placebo-)mentioned peers. The sample splits are determined by taking the distance between air bases measured six months before the (placebo-) mention. Panel A shows exponentiated coefficients on a log scale. We provide the estimate from the full sample as a baseline. All coefficients are estimated with the specification from Table 3, column 1. We provide 95% confidence intervals in grey and 90% intervals in black.