

Supplementary materials

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Power analyses

Experiments 1 and 2

Our experimental paradigm was based on the Zeelenberg et al. (2002) studies which also manipulated normality of the action-effect (although, we note, the prior outcomes normality, not social norms normality, see introduction for more detail). In Study 1 the authors reported three normality conditions with percentages of 91%, 78%, and 31%, which resulted in an effect size w of .39. Using G*Power 3.1.9.2 and settings of 0.8 power and alpha of .05 we calculated a required sample of 64 to detect normality using a 3-conditions chi-square experimental design.

Experiment 3

Experiment 3 followed with a similar experimental paradigm to Zeelenberg et al. (2002) Study 2. Their Study 2 showed an even greater effect for a manipulated (rather than a compared) action versus inaction in which they examined an interaction with statistics of $F(2,72) = 21.32$. The strong effect with power analysis indicated an even smaller sample size than that for Experiments 1 and 2. To be conservative, we then based our effect estimates on our results from Experiment 1. We converted Experiment 1's chi-square of 6.32 ($N=76$) to Cohen d of .60 and F of .3. Using G*Power 3.1.9.2 for 0.8 power and alpha of .05, the power analysis showed that the sample size required for a 2x2 in Experiment 3 is 111.

Experiment 4

Experiment 4 aimed at achieving higher power (0.99) to discover the smallest effect $d = .60$ found in Experiment 1 ($f = .30$), indicated a required sample of 243. We therefore set to collect at least 100 participants per condition, 300 overall.

Materials used in the experiments

Experiment 1

Conditions

Action condition

Mr. Paul and Mr. George are stock traders who work for A&M Finance. A&M Finance strongly emphasizes actions and proactive decision making, shows a clear preference for action over inaction, and evaluates its employees based on their ability to act and actively seek out good investments.

Paul has made the decision to invest in company A. During the past year he considered switching to invest stock in company C, but he decided against it. He now finds out that the investment would have been better off by \$1,000,000 if he had switched to the stock of company C.

George has made the decision to invest in company B. During the past year he switched the investment to stock in company A. He now finds out that the investment would have been better off by \$1,000,000 if he had kept his investment in stock for company B.

Inaction condition

Mr. Paul and Mr. George are stock traders who work for B&N Finance. B&N Finance strongly emphasizes cautious and responsible decision making, shows a clear preference for inaction over action, and evaluates its employees based on their ability to refrain from undertaking bad investments.

Paul has made the decision to invest in company A. During the past year he considered switching to invest stock in company C, but he decided against it. He now finds out that the investment would have been better off by \$1,000,000 if he had switched to the stock of company C.

George has made the decision to invest in company B. During the past year he switched the investment to stock in company A. He now finds out that the investment would have been better off by \$1,000,000 if he had kept his investment in stock for company B.

Control condition

Mr. Paul and Mr. George are stock traders who work for C&O Finance. C&O Finance strongly emphasizes performance.

Paul has made the decision to invest in company A. During the past year he considered switching to invest stock in company C, but he decided against it. He now finds out that the investment would have been better off by \$1,000,000 if he had switched to the stock of company C.

George has made the decision to invest in company B. During the past year he switched the investment to stock in company A. He now finds out that the investment would have been better off by \$1,000,000 if he had kept his investment in stock for company B.

Quiz comprehension questions

Participants had to answer the following questions correctly before proceeding to the attributions questions.

What does the company Paul and George work for emphasize:?

1. Taking action to find good investments
2. Refraining from bad decisions
3. Learning

4. Performance

Paul's final investment decision involved which of the following?

1. Switching investments
2. Not switching investments

George's final investment decision involved which of the following?

1. Switching investments
2. Not switching investments

At the end, Paul was invested in which company?

1. Company A
2. Company B
3. Company C

At the end, George was invested in which company?

1. Company A
2. Company B
3. Company C

Attribution questions

Who do you think the company considers to be a better stock broker?

1. Paul
2. George

In your opinion, who feels greater regret over his investment decision?

1. Paul
2. George

Experiment 2

Conditions

Intent action condition

Mr. Paul and Mr. George are stock traders who work for A&M Finance. Most, if not all, of the stock traders working for A&M Finance are very action-driven, eager and proactive decision makers, strongly valuing action over inaction. The norms in this company are for people to keep looking for new opportunities for investment with the unofficial motto of "go for it!".

Paul has made the decision to invest in company A. During the past year he considered switching to invest stock in company C, but he decided against it. He now finds out that the investment would have been better off by \$1,200,000 if he had switched to the stock of company C.

George has made the decision to invest in company B. During the past year he switched the investment to stock in company A. He now finds out that the investment would have been better off by \$1,200,000 if he had kept his investment in stock for company B.

Intent inaction condition

Mr. Paul and Mr. George are stock traders who work for B&N Finance. Most, if not all, of the stock traders working for B&N Finance are very careful and cautious decision makers, strongly valuing the status-quo over taking action. The norms in this company are for people to not act unless they are certain it is necessary, with the unofficial motto of "if it isn't broken, don't fix it!".

Paul has made the decision to invest in company A. During the past year he considered switching to invest stock in company C, but he decided against it. He now finds out that the investment would have been better off by \$1,200,000 if he had switched to the stock of company C.

George has made the decision to invest in company B. During the past year he switched the investment to stock in company A. He now finds out that the investment would have been better off by \$1,200,000 if he had kept his investment in stock for company B.

Intent control condition

Mr. Paul and Mr. George are stock traders who work for C&O Finance.

Paul has made the decision to invest in company A. During the past year he considered switching to invest stock in company C, but he decided against it. He now finds out that the investment would have been better off by \$1,200,000 if he had switched to the stock of company C.

George has made the decision to invest in company B. During the past year he switched the investment to stock in company A. He now finds out that the investment would have been better off by \$1,200,000 if he had kept his investment in stock for company B.

No intent action condition

Mr. Paul and Mr. George are stock traders who work for A&M Finance. Most, if not all, of the stock traders working for A&M Finance are very action-driven, eager and proactive decision makers, strongly valuing action over inaction. The norms in this company are for people to keep looking for new opportunities for investment with the unofficial motto of "go for it!".

Paul has made the decision to invest in company A. During the past year he considered switching to invest stock in company C, but at the end he could not decide whether to switch his initial investment or not so he left it all to chance by tossing a coin. The coin indicated that he should keep his investment in company A. He now finds out that the investment would have been better off by

\$1,200,000 if the result of the coin toss would have instructed him to switch to the stock of company C.

George has made the decision to invest in company B. During the past year he considered switching to invest stock in company A, but at the end he could not decide whether to switch his initial investment or not so he left it all to chance by tossing a coin. The coin indicated that he should switch his investment to company A. He now finds out that the investment would have been better off by \$1,200,000 if the result of the coin toss would have instructed him to not switch to the stock of company A.

No intent inaction condition

Mr. Paul and Mr. George are stock traders who work for B&N Finance. Most, if not all, of the stock traders working for B&N Finance are very careful and cautious decision makers, strongly valuing the status-quo over taking action. The norms in this company are for people to not act unless they are certain it is necessary, with the unofficial motto of "if it isn't broken, don't fix it!".

Paul has made the decision to invest in company A. During the past year he considered switching to invest stock in company C, but at the end he could not decide whether to switch his initial investment or not so he left it all to chance by tossing a coin. The coin indicated that he should keep his investment in company A. He now finds out that the investment would have been better off by \$1,200,000 if the result of the coin toss would have instructed him to switch to the stock of company C.

George has made the decision to invest in company B. During the past year he considered switching to invest stock in company A, but at the end he could not decide whether to switch his initial investment or not so he left it all to chance by tossing a coin. The coin indicated that he should switch his investment to company A. He now finds out that the investment would have been better off by \$1,200,000 if the result of the coin toss would have instructed him to not switch to the stock of company A.

No intent control condition

Mr. Paul and Mr. George are stock traders who work for C&O Finance.

Paul has made the decision to invest in company A. During the past year he considered switching to invest stock in company C, but at the end he could not decide whether to switch his initial investment or not so he left it all to chance by tossing a coin. The coin indicated that he should keep his investment in company A. He now finds out that the investment would have been better off by \$1,200,000 if the result of the coin toss would have instructed him to switch to the stock of company C.

George has made the decision to invest in company B. During the past year he considered switching to invest stock in company A, but at the end he could not decide whether to switch his initial investment or not so he left it all to chance by tossing a coin. The coin indicated that he should switch his investment to company A. He now finds out that the investment would have been better off by \$1,200,000 if the result of the coin toss would have instructed him to not switch to the stock of company A.

Quiz comprehension questions for intent conditions

Participants had to answer the following questions correctly before proceeding to the attributions questions.

What does the company Paul and George work for emphasize?

1. Taking action to find good investments
2. Refraining from bad decisions
3. Learning
4. Performance

Paul's final investment decision involved which of the following?

1. Switching investments
2. Not switching investments

George's final investment decision involved which of the following?

1. Switching investments
2. Not switching investments

At the end, Paul and George both had finally invested in which company?

1. Company A
2. Company B
3. Company C

Quiz comprehension questions for no intent conditions

Participants had to answer the following questions correctly before proceeding to the attributions questions.

What does the company Paul and George work for emphasize?

1. Taking action to find good investments
2. Refraining from bad decisions
3. Learning
4. Performance

Paul's coin toss resulted in which of the following?

1. Switching investments
2. Not switching investments

George's coin toss resulted in which of the following?

1. Switching investments
2. Not switching investments

At the end, Paul and George both had finally invested in which company?

1. Company A
2. Company B
3. Company C

Attribution questions

Whose decision is probably more common in this company?

1. Paul
2. George

In your opinion, who feels greater regret over his investment decision?

1. Paul
2. George

Experiment 3

Conditions

Action society – action decision condition

Imagine a society that is mostly driven by action. Most, if not all, of the people living in this society are very proactive and action-oriented, strongly valuing action over inaction. The norms in this society are for people to keep busy and minimize idle time.

Now try and imagine that you are a member of such society, and that you are experiencing the following situation:

You are a member of this action-driven society and have recently inherited 1,000,000US\$ which were already invested in the stocks of company Y. Credible reports indicated that the stock of a different company, company X, shows greater promise and potential for earnings. You have taken action and changed the investment from company Y to company X. At the end of the year you realize that you would have been better off by 200,000US\$ had you not made the switch in investment.

Action society – inaction decision condition

Imagine a society that is mostly driven by action. Most, if not all, of the people living in this society are very proactive and action-oriented, strongly valuing action over inaction. The norms in this society are for people to keep busy and minimize idle time.

Now try and imagine that you are a member of such society, and that you are experiencing the following situation:

You are a member of this action-driven society and have recently inherited 1,000,000US\$ which were already invested in the stocks of company X. Credible reports indicated that the stock of a different company, company Z, shows greater promise and potential for earnings. However, you have not taken action and left the investment in company X instead of shifting the investment to company Z. At the end of the year you realize that you would have been better off by 200,000US\$ had you decided to make the switch in investment.

Inaction society – action decision condition

Imagine a society that is mostly driven by inaction. Most, if not all, of the people living in this society are very passive and oriented towards inaction, strongly valuing the status-quo over taking action. The norms in this society are for people to refrain from action and maximize idle time.

Now try and imagine that you are a member of such society, and that you are experiencing the following situation:

You are a member of this inaction-driven society and have recently inherited 1,000,000US\$ which were already invested in the stocks of company Y. Credible reports indicated that the stock of a different company, company X, shows greater promise and potential for earnings. You have taken action and changed the investment from company Y to company X. At the end of the year you realize that you would have been better off by 200,000US\$ had you not made the switch in investment.

Inaction society – inaction decision condition

Imagine a society that is mostly driven by inaction. Most, if not all, of the people living in this society are very passive and oriented towards inaction, strongly valuing the status-quo over taking action. The norms in this society are for people to refrain from action and maximize idle time.

Now try and imagine that you are a member of such society, and that you are experiencing the following situation:

You are a member of this inaction-driven society and have recently inherited a 1,000,000US\$ which were already invested in the stocks of company X. Credible reports indicated that the stock of a different company, company Z, shows greater promise and potential for earnings. However, you have not taken action and left the investment in company X instead of shifting the investment to company Z. At the end of the year you realize that you would have been better off by 200,000US\$ had you decided to make the switch in investment.

Quiz comprehension questions

Participants had to answer the following questions correctly before proceeding to the attributions questions.

In such a society which of the following is the more normative behavior?

1. Action
2. Inaction
3. Neither

Attribution questions

In such a society, how likely are you to feel regret over your behavior in this situation?

0 = Not at all; 6 = Very much

Experiment 4

Conditions

Action condition

Paul and George are cousins who grew up in a family that values action. Most, if not all, of the family members are very proactive and action-oriented, strongly valuing taking action over inaction. The norms in this family are for family members to keep busy and minimize idle time.

Paul has made the decision to invest in company A. During the past year he considered switching to invest stock in company C, but he decided against it. He now finds out that the investment would have been better off by \$1,200,000 if he had switched to the stock of company C.

George has made the decision to invest in company B. During the past year he switched the investment to stock in company A. He now finds out that the investment would have been better off by \$1,200,000 if he had kept his investment in stock for company B.

Paul and George's investment decisions are private, but the outcomes are public. Meaning, that the family never knows of the investment decisions made at any time, and Paul and George do not know of each other's decisions, but everyone in the family knows about the outcomes of both investment decisions.

Inaction condition

Paul and George are cousins who grew up in a family that values inaction. Most, if not all, of the family members are very passive and oriented towards inaction, strongly valuing the status--quo over taking action. The norms in this family are for family members to refrain from unnecessary action and maximize idle time.

Paul has made the decision to invest in company A. During the past year he considered switching to invest stock in company C, but he decided against it. He now finds out that the investment would have been better off by \$1,200,000 if he had switched to the stock of company C.

George has made the decision to invest in company B. During the past year he switched the investment to stock in company A. He now finds out that the investment would have been better off by \$1,200,000 if he had kept his investment in stock for company B.

Paul and George's investment decisions are private, but the outcomes are public. Meaning, that the family never knows of the investment decisions made at any time, and Paul and George do not know of each other's decisions, but everyone in the family knows about the outcomes of both investment decisions.

Control condition

Paul and George are cousins who grew up in the same family.

Paul has made the decision to invest in company A. During the past year he considered switching to invest stock in company C, but he decided against it. He now finds out that the investment would have been better off by \$1,200,000 if he had switched to the stock of company C.

George has made the decision to invest in company B. During the past year he switched the investment to stock in company A. He now finds out that the investment would have been better off by \$1,200,000 if he had kept his investment in stock for company B.

Paul and George's investment decisions are private, but the outcomes are public. Meaning, that the family never knows of the investment decisions made at any time, and Paul and George do not know

of each other's decisions, but everyone in the family knows about the outcomes of both investment decisions.

Quiz comprehension questions

Participants had to answer the following questions correctly before proceeding to the attributions questions.

What best describes Paul and George's family:

1. Driven by action
2. Driven by inaction
3. Driven by love

Paul and George's investment decision regarding whether to switch the investment or not are...

1. Private
2. Public
3. We don't know

The outcomes of Paul and George's investment decision are...

1. Private
2. Public
3. We don't know

Paul's final investment decision involved which of the following?

1. Switching investments
2. Not switching investments

George's final investment decision involved which of the following?

1. Switching investments
2. Not switching investments

At the end, Paul and George both had finally invested in which company?

1. Company A
2. Company B

Attribution questions

Whose decision is probably more common in Paul and George's family?

1. Definitely Paul's decision NOT to switch
2. Most likely Paul's decision NOT to switch
3. Probably Paul's decision NOT to switch
4. Probably George's decision to switch
5. Most likely George's decision to switch
6. Definitely George's decision to switch

Please rate your agreement with the following statement - Paul's decision not to switch the investment is well justified

1. Strongly disagree
2. Disagree

3. Somewhat disagree
4. Neither agree nor disagree
5. Somewhat agree
6. Agree
7. Strongly agree

Please rate your agreement with the following statement - George's decision to switch the investment is well justified

1. Strongly disagree
2. Disagree
3. Somewhat disagree
4. Neither agree nor disagree
5. Somewhat agree
6. Agree
7. Strongly agree

In your opinion, who feels greater regret over his investment decision?

1. Definitely Paul
2. Most likely Paul
3. Probably Paul
4. Probably George
5. Most likely George
6. Definitely George

How common is a family like Paul and George's family in the country where you currently live?

0 = Very rare or none at all; 5 = Extremely common

Procedure and data disclosures

Data collection

In all experiments, data collection was completed before conducting an analysis of the data.

Data exclusions

In Experiments 1, 2, and 4 participants had to answer the comprehension checks correctly in order to proceed with the experiment. In Experiment 3 answering correctly was not a prerequisite for proceeding, and seven participants answered incorrectly and were therefore excluded for failing the comprehension checks. The exclusions are reported in methods section of Experiment 3. We indicated that “removing these participants did not significantly affect the results”.

Below are the results of the full sample:

	Action decision	Inaction decision	Total
Action Society	4.12 (1.93) [33]	4.93 (1.41) [29]	4.50 (1.74) [62]
Inaction Society	5.34 (.90) [29]	3.29 (2.16) [31]	3.77 (2.27) [60]
Total	4.69 (1.65) [62]	4.57 (2.26) [60]	4.14 (2.04) [122]

Conditions reporting

All collected conditions are reported.

Variables reporting

The purpose of the study was to examine how a manipulation of social norms impacts the action-effect. In the data collection, we also collected data examining the broader perceived social norms for action-action for possible future studies. Therefore, Experiments 1 and 2 included an additional separate section at the end asking participants about the perceived social norms more broadly in society, e.g. “In your country of residence, do you think people are generally more oriented towards action or towards inaction?” (1 – Action; 2 – Inaction).

As discussed in the general discussion section, after running Experiments 1 and 2 we identified the possibility of a cognitive bias in that leads to a shift of perceived norms of negative outcomes from action more broadly to inaction in decision-making scenarios with negative outcomes. Therefore, in Experiment 3 manipulating society-level norms and before the presentation of the action and inaction manipulations, we asked about perceptions of society more broadly and related attributions (e.g., “How similar is this society to the society in the country where you currently live?”).