Effects of group influence and informational focus on argument evaluation

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more about the research discussed in this thesis and any publications based on it, to which you could refer, please contact the supervisor mentioned.

Keep the above text as it is.

Abstract

Theories about social influence have illustrated how the group can influence the decision making and thought process of the individual. While these theories differ in the extent and nature of this influence there seems to be strong evidence for the influence of identification with a group and conceiving information according to the group's norm. In this study, we want to further analyze the extent that informational salience and group identification influence people's evaluation of arguments. We conducted an experimental study (N=224) where we manipulated information salience and measured participant's identification with their group of psychology students. The results indicate that the degree of group identification indeed affects the evaluation of arguments. Our interaction of informational focus and argument strength had no significant results while the means indicate a connection between informational focus and more critical thinking in general.

Keywords: social influence, informational influence, group influence

Effects of group influence and informational focus on argument evaluation

Social influence describes how an individual's attitudes, beliefs or behaviour are influenced by others. This process is part of everyone's daily life and noticeable on a small scale when thinking about persuasion techniques in sales (Rodafinos et al., 2005) or a broader societal context with COVID protests where both opposing sides claim to know the real facts. Because of this eminent presence in the human experience, a lot of research has been conducted on the topic of social influence. Our aim is to investigate how group identification and informational focus influence the evaluation of arguments.

One of the most influential theories on social influence is the "dual process model" by Deutsch and Gerard (1955). They split social influence into informational social influence and normative social influence. Informational social influence is based on the individual's desire to be right. When the situation is ambiguous the individual tends to look at the behaviour of others and mimics it based on the belief that the group knows more than the individual. Normative social influence on the other hand is based on the desire to be accepted within a group. Being part of a group is desirable, but the group also has the power to exclude and punish individuals which leads to compliance. This principle was illustrated by Asch (1956) with an experiment in which participants chose the obviously wrong answer in the presence of others who made this choice before them.

In addition to this classical theory, Turner (1987) developed the "self-categorization theory" (SCT) which describes that an individual can even think of themselves in terms of a group. On the basis of SCT, he extended the dual-process model by "referent informational influence" (RII) which combines informational and group influence. (Turner, 1982) This implies that in an ambiguous situation, the individual not only looks at the group because they think it knows more than the individual like in informational influence or because of the

desire to be accepted like normative influence (Deutsch & Gerard, 1955), but the individual also trusts the group to provide valid information for this situation. Both theories are not very practical as they imply that only one factor and process of influence takes place while human interactions with the world tend to be more complex and nuanced. Especially the dual-process model assumes that the process of group influence does not resemble true influence, more specifically that normative influence does not resemble true influence. Spears (2021) created a three-realm model which attempts to explain in which circumstance one of the three or a combination of influences is more prevalent than the others.

In this study, we want to examine how informational focus interacts with group identification and how this affects the evaluation of arguments.

Theoretical Background

This section will further elaborate on the model by Spears (2021) and explain relevant research and theories as well as the hypothesis for this study.

According to the model, the other/outward realm describes a situation in which the focus is not directed at the individual or more generally the self. Spears (2021) argues that in this realm social and environmental factors are not involved, and the main focus lies in problem-solving and information processing skills. This resembles the informational social influence from the dual-process model as the received information will be internalized by the individual. (Deutsch & Gerard, 1955) A good predictor for this internalization of information is perceived argument strength. (Petty & Cacioppo, 1986) As in the other/outward realm the attention is not directed to the individual, aspects like identity should play a smaller role compared to objective analysis of information and arguments. This leads to our first hypothesis:

Hypothesis 1a: People will be more influenced by strong arguments than weak arguments.

We manipulated information focus and made it more salient for some participants, so our second hypothesis is:

Hypothesis 1 b: When information focus is made more salient a polarization in the evaluation of argument takes place. Strong arguments will be rated as stronger and weak arguments will be rated as weaker

The group self realm describes a situation in which the individual defines themselves in terms of their shared group identities (e.g. psychology students). The basis of this realm lies in SCT (Turner, 1987) and group identity. This group influence occurs whenever the individual defines themselves as part of a group and the individual then accepts the group message as part of the self. This type of influence is also described by Turner (1982) in form of RII as it focuses on the group aspect like in normative influence but results in true influence similar to informational influence. For this process to occur, the physical presence of the group is not necessary, the group identities are internal and salience of this identity can activate the effect. According to Spears (2021) people base their judgement on the opinion of others and belonging to a group with shared values increases the likelihood of accepting the information provided. This is in line with the concept of homophily, the idea that individuals are more likely to be influenced by similar people. (Feliciani et al. 2017) The focus on group identity is particularly strong for individuals that identify themselves highly with the group and its norms. (Ellemers et al. 2002) White et al. (2009) showed that high identification was a predictor for conforming to the group norm of recycling which leads us to our next hypothesis:

Hypothesis 2: High identification with the group will lead to less focus on the content of arguments. High identifiers should rate argument strength higher than low identifiers.

The question arises whether the difference in the evaluation of arguments can also stem from differences in cognitive abilities and critical thinking skills of people, therefore our last hypothesis is:

Hypothesis 3: People with a high need for cognition will focus more on argument strength and are more likely to be only persuaded by strong arguments.

Method

Participants and Design

In total the research consisted of 224 participants from the University of Groningen. The research consisted of 74.8% female students and 24.9% male students. Furthermore, there are 56.1% national and 43.9% international students. The RUG ethics committee approved the study before it was activated online. The SONA system is used for first-year psychology students, who are required to collect a certain number of SONA-credits to progress in their study. SONA is an online system which displays the relevant information to the participants in English. It is accessible on different devices and only requires a working internet connection, meaning it can be used independent of location. Participants who completed the study were rewarded 0.6 SONA-credits.

A 2 (“argument strength”: strong vs weak) x 2 (“informational focus”: yes vs no; between) between participants design was used. Furthermore, group identity and need for cognition were used as additional (continuous) moderators. Participants gave their consent in taking part in the study. A random sampling procedure was utilized to assign the participants to one of four conditions. After filling in the questionnaire the participants were debriefed about the real purpose of the research.

Before conducting the main study, a pilot study was used to explore different aspects of various arguments about the new website. Participants were asked to rate arguments on two seven-point Likert-scales concerning believability and argument strength. They were also asked to provide feedback to the provided cover story for the ‘New Nestor’ task. The results from the pilot study were utilized to select the arguments used in the main study. See appendix C for further details.

Procedure and Materials

The study itself was designed using Qualtrics online questionnaire software (www.qualtrics.com), whereby participants were guided to a research-specific Qualtrics URL from the SONA-systems site. The "Randomizer" function of Qualtrics was used, resulting in a random distribution of the participants among all conditions. Participants were expected to complete two tasks; the 'New Nestor' task and the 'Job selection' task. In the 'New Nestor' task students are giving their opinion about a new software program following arguments made by other students to measure social influence. In the 'Job selection' task students are giving their opinion about hiring a new lecturer to the university to prime informational focus.

Group identity scale

The research started with questions about how the participants viewed themselves as a psychology student. They answered fourteen questions on a Likert scale with seven levels (Leach et al., 2008) ranging from strongly disagree to strongly agree. An example of an item is: 'It is pleasant to be a RUG psychology student' (see appendix Y). The reliability of the scale is $\alpha = .85$. Next the participants were divided into one of four conditions. The first condition consisted of strong arguments where informational focus was primed, the second condition consisted of weak arguments where informational focus was primed. In the third condition, participants were presented with strong arguments and were not primed with informational focus, whereas in the last condition participants were presented with weak arguments and were primed with informational focus.

Need for Cognition scale

When informational focus was primed, the need for cognition scale and 'Job Selection' task were in front of the 'New Nestor' task. It was the other way around when informational focus was not primed. The need for cognition scale (Cacioppo, Petty, & Kao, 1984) consisted of eighteen five-point Likert scale questions ranging from strongly extremely uncharacteristic to extremely characteristic. An example of a statement is: 'I would prefer complex to simple problems' (see appendix Y). The reliability of the scale is $\alpha = .74$.

Job Selection task

Following the Need for Cognition scale, the participants were shown the 'Job Selection' task. This part was added to prime informational focus. In this task, participants

had to read summaries consisting reference letters of two job candidates. Subsequently, the participants had to answer three seven-point Likert scale questions ranging from extremely unlikely to extremely likely about how likeable and qualified each candidate is, and which candidate they thought would be most suited for the job (see appendix A).

New Nestor task

Next up, the 'New Nestor' task designed to asses social influence was being presented to the participants. As the main part of the experiment, this task measured the degree to which participants were being persuaded by the arguments presented. Firstly, the participants had to read the cover story, which stated that an alternative to Nestor was being trialed with a potential perspective to being implemented. The cover story mentions two different tasks the participants had to complete. Following the story, the students were shown three strong or three weak arguments. These arguments that were allegedly given by psychology students.

Afterwards the participants were asked to give their opinion on whether they prefer the new software to Nestor. They answered ten questions on a seven-points Likert-scale ranging from strongly disagree to strongly agree. An example of a statement was: 'I think this new software will make the site easier to use.' See appendix B for the cover story, the arguments and the scale.

Results

Main analysis

In this section, all relevant main effects and interaction effects for our hypothesis will be presented. We analyzed the results in form of a three-way ANOVA.

The analysis showed that arguments strength (F=1.520, p=0.219) was not significant. This indicates that our results do not support hypothesis 1a. Although the mean of 4.852 for strong arguments is higher than the mean of low arguments of 4.697. The main effect of information salience (F=0.086, p=0.770) was not significant and the two-way interaction effect of information salience and argument strength (F=0.837, p=0.361) was also non-significant and thus not in line with hypothesis 1b. The means show the opposite effect

from our prediction as the non-information salient group has a greater polarization of means (M=4.642, M=4.920) compared to the information salient group (M=4.752, M=4.784). Identification (F=9.983, p=0.002) has a significant effect. To further examine this effect, we conducted a median split to illustrate this effect of identification. Low identifiers had a mean rating of arguments of 4.631 (SE=0.083) while high identifiers had a mean of 4.918 (SE=0.079). These results are in line with our hypothesis 2. We also analyzed the relationship between argument strength and the need for cognition (F=0.385, p=0.536). This result is not significant and does not support hypothesis 3.

Exploratory Effects

We further analyzed the data from the two-way ANCOVA and the results beyond our hypotheses will be presented here.

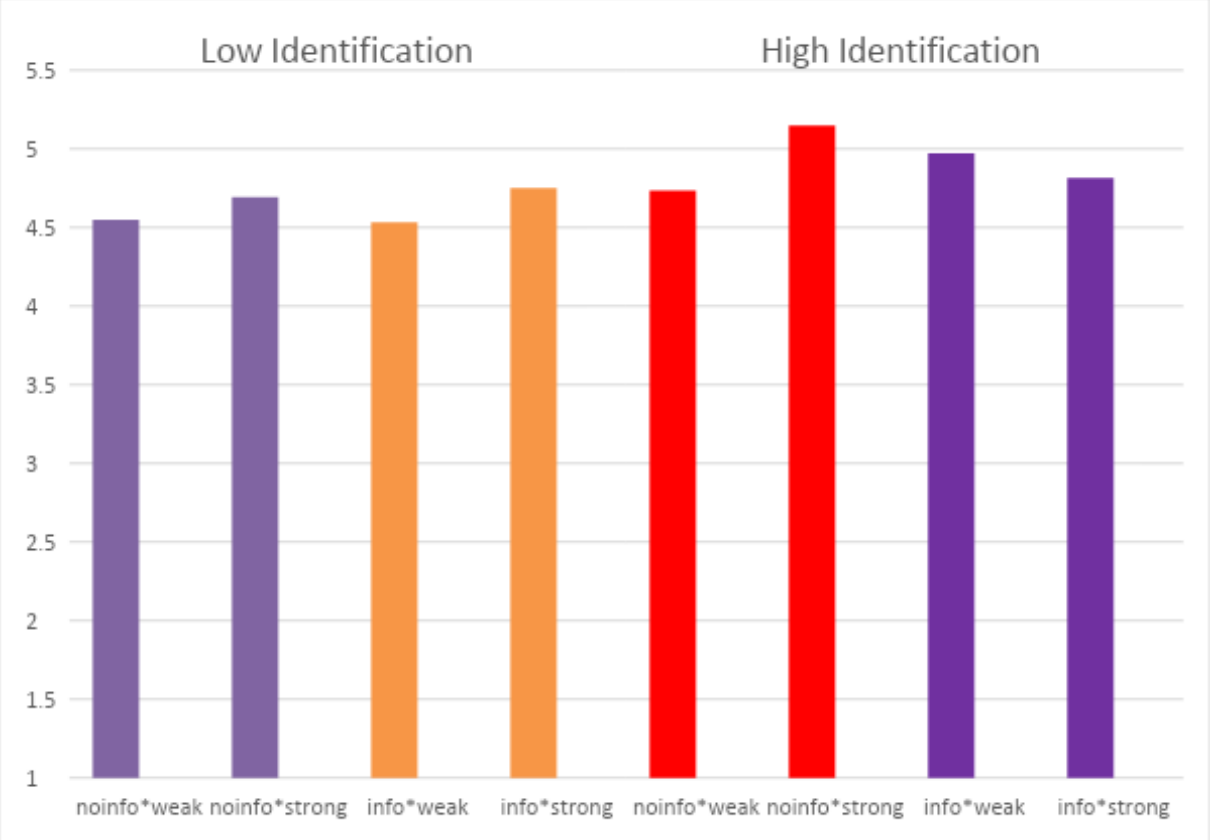

Figure 1: Bar chart of the three-way interaction between information salience, argument strength and identification on social influence. Social influence was measured on a seven-point scale.

Figure 1 shows the relationship between information salience, argument strength and identification which resulted in a nearly significant 3-way interaction (F=3.636, p=0.058). The low identification group rated strong arguments higher, regardless of information

salience. The high identification group showed the same effect if information was not salient, with higher means than low identifiers, but the opposite effect if information was salient.

Discussion

This research further explores the relationship between the different sources of social influence. Although not all hypotheses were supported by significant effects, we were able to find patterns in non-significant means. Overall, our results add to the ideas of Spears (2021) and provide further insight into his model.

Even though the means show that strong arguments were rated higher than weak arguments, the results were non-significant. There are multiple reasons why this could have been observed. The arguments were provided by us researchers, students at a different stage of their studies than the participants. Also, most of the participants of the pilot study are further into their studies than the participants of this study. Both factors could have contributed to the results as first-year students have less experience with the current Nestor and therefore different needs, expertise and priorities. The results regarding information salience and argument strength (Hypothesis 1b) indicate that if informational focus is salient, especially stronger arguments are evaluated more critically. This result is interesting as we predicted a stronger polarization, with weak arguments being evaluated lower and strong arguments being evaluated higher compared to when information focus is not salient. So informational focus might activate a more critical thinking pattern in general, but more research must be done to provide evidence.

Group identification had a significant effect on argument strength which supported our hypothesis 2 stating that high group identification will lead to a higher evaluation of arguments. Even though we could not find significant evidence for hypothesis 1 on the main effect of argument strength, group identification seems to be an indicator of how arguments are evaluated. If we define the arguments provided as group norms, then this is in line White et al. (2009), Turner (1991) and Spears (2021) results. The results illustrated in Figure 1 indicate that high identification and information salience led to strong arguments being evaluated slightly worse than weak arguments. If we assume them to be rather equal as the difference is not significant, this can be explained by the normative conflict model (Packer, 2008,2012) which argues that high identifiers sometimes reject group norms if they see them as disadvantageous to the groups' interest. In combination with the general choice of arguments and the lack of a significant effect of argument strength, we could interpret that

high identifiers might have been extra critical of strong arguments by our definition to protect the groups' interest of receiving the best student portal possible.

Limitations and future research

Some of the limitations of this study have been pointed out briefly already. One concern is the informational focus. In addition to the normative conflict model, another reason for the results might be the way we made information salient through the job selection task which could unintentionally also influence group identity as psychology students. As the task requires choosing a professor this could also make group identity more salient. This effect was not indented and could be an explanation for our non-significant results. Another limitation is the source of arguments which might have led to the non-significant results concerning the main effect of argument strength and could improve power. Either a more extensive pilot study or arguments provided by the targeted group of the study could provide more significant results. Also, the selection of arguments was not only based on argument strength but also credibility. Therefore not necessarily the strongest and weakest arguments were part of our study which might have led to the non-significant results. Future research should investigate the relationship between informational focus and the activation of overall critical thinking. Our results indicate a relationship but this needs to be explored further.

Conclusion

Taken together the results of our study support the hypothesis that group identification influences informational intake. Other results show no significance, although the pattern of means indicate a direction of the effect.

References

Asch, S. E. (1956). Studies of independence and conformity: I. A minority of one against a unanimous majority. *Psychological Monographs: General and Applied*, *70*(9), 1–70. https://doi.org/10.1037/h0093718

Deutsch, M., & Gerard, H. (1955). A study of normative and informational social influences upon individual judgement. Journal of Abnormal Social Psychology, 51(3), 629-636. DOI: 10.1037/h0046408

Ellemers, N., Spears, R., & Doosje, B. (2002). Self and Social Identity. *Annual Review of Psychology*, *53*(1), 161–186. https://doi.org/10.1146/annurev.psych.53.100901.135228

Feliciani, T., Flache, A., & Tolsma, J. (2017). How, when and where can Spatial Segregation Induce Opinion Polarization? Two Competing Models. *Journal of Artificial Societies and Social Simulation*, *20*(2). https://doi.org/10.18564/jasss.3419

Packer, D. J. (2008). On Being Both With Us and Against Us: A Normative Conflict Model of Dissent in Social Groups. *Personality and Social Psychology Review*, *12*(1), 50–72. https://doi.org/10.1177/1088868307309606

Packer, D. J. (2012). On not airing our dirty laundry: Intergroup contexts suppress ingroup criticism among strongly identified group members. *British Journal of Social Psychology*, *53*(1), 93–111. https://doi.org/10.1111/bjso.12017

Petty, R. E., Cacioppo, J. T., & Abraham, C. (1986). *The Elaboration Likelihood Model of Persuasion*. New York: Springer.

Rodafinos, A., Vucevic, A., & Sideridis, G. D. (2005). The Effectiveness of Compliance Techniques: Foot in the Door Versus Door in the Face. *The Journal of Social Psychology*, *145*(2), 237–240. https://doi.org/10.3200/socp.145.2.237-240

Spears, R. (2021). Social influence and group identity. Annual Review of Psychology, 72, 367- 390. DOI: 10.1146/annurev-psych-070620-111818

Turner, J. C. (1982). Towards a cognitive redefinition of the social group. In H. Tajfel (Ed.) Social Identity and Intergroup Relations (pp. 15-40). Cambridge, UK: Cambridge University Press.

Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1989). Rediscovering the Social Group: A Self-Categorization Theory. *Contemporary Sociology*, *18*(4), 645.

White, K. M., Smith, J. R., Terry, D. J., Greenslade, J. H., & McKimmie, B. M. (2009). Social influence in the theory of planned behaviour: The role of descriptive, injunctive, and in-group norms. *British Journal of Social Psychology*, *48*(1), 135–158. https://doi.org/10.1348/014466608x295207

Appendix A

Qualtrics survey

(Study Information document being displayed)

As mentioned on the information page, we think it is important that you are informed well before you participate in this study. We therefore ask you to respond below, in which you can give permission to participate in the study as described on the previous web page. If you consent to participate, you can continue to read the instructions for the questionnaire on the following screens.

"I have read the information about the research. I have had enough opportunity to ask questions about it.

I understand what the research is about, what is being asked of me, what consequences participation can have, how my data will be handled, and what my rights as a participant are.

I understand that participation in the research is voluntary. I myself choose to participate. I can stop participating at any moment. If I stop, I do not need to explain why. Stopping will have no negative consequences for me. Below I indicate what I am consenting to:"

If you consent, click on yes below. If not, simply exit the study.

Consent to participate in this research?

Yes, I consent to participate

As a participant, you have the right to a copy of this consent form. You can create a copy by taking a screenshot, using your (smartphone) camera or the Print Screen button on your computer.

Now we would like to ask your opinion about how you see yourself as a psychology student at the Rijksuniversiteit Groningen (RUG) and how you feel about your fellow psychology students.

I feel a bond with psychologists. (answers ranging on a 7-point Likert scale with the labels: ‘‘Strongly disagree’’, ‘‘Disagree’’, ‘‘Somewhat disagree’’, ‘‘Neither agree nor disagree’’, ‘‘Somewhat agree’’, ‘‘Agree’’, ‘‘Strongly agree’’ from left to right). The scale was the same for all items.

I feel solidarity with RUG psychologists.

I feel committed to RUG psychologists.

I am glad to be a RUG psychologist.

I think that RUG psychologists have a lot to be proud of.

It is pleasant to be a RUG psychologist.

Being a RUG psychologist gives me a good feeling.

I often think about the fact that I am a RUG psychologist.

The fact that I am a RUG psychologist is an important part of my identity.

Being a RUG psychologist is an important part of how I see myself.

I have a lot in common with the average RUG psychologist.

I am similar to the average RUG psychologist.

RUG psychologists have a lot in common with each other.

RUG psychologists are very similar to each other.

In the following section we would like to find out about your evaluative and critical thinking abilities. First, we would like to directly ask you about those critical and evaluative skills, and then on a second task, we are going to put those skills to the test. Rate how (un)characteristic each statement is of you.

1. I would prefer complex to simple problems. (answers ranging on a 5-point Likert scale with the labels: ‘‘Extremely uncharacteristic’’, ‘‘Somewhat uncharacteristic’’,

‘‘Uncertain’’, ‘‘Somewhat characteristic’’, ‘‘Extremely characteristic’’ from left to right). The scale was the same for all items.

2. I like to have the responsibility of handling a situation that requires a lot of thinking.

3. Thinking is not my idea of fun.

4. I would rather do something that requires little thought than something that is sure to challenge my thinking abilities.

5. I try to anticipate and avoid situations where there is likely a chance, I will have to think in depth about something.

6. I find satisfaction in deliberating hard and for long hours.

7. I only think as hard as I have to.

8. I prefer to think about small, daily projects to long-term ones.

9. I like tasks that require little thought once I’ve learned them.

10. The idea of relying on thought to make my way to the top appeals to me.

11. I really enjoy a task that involves coming up with new solutions to problems.

12. Learning new ways to think doesn't excite me very much.

13. I prefer my life to be filled with puzzles that I must solve.

14. The notion of thinking abstractly is appealing to me.

15. I would prefer a task that is intellectual, difficult, and important to one that is somewhat important but does not require much thought.

16. I feel relief rather than satisfaction completing a task that required a lot of mental effort.

17. It's enough for me that something gets the job done; I don't care how or why it works.

18. I usually end up deliberating about issues even when they do not affect me personally.

Job selection task

In the following section we would like to find out about your evaluative and critical thinking abilities. We have just asked you directly about those critical and evaluative skills in the previous questionnaire, and now, on a second task, we are going to put those skills to the test.

We would like to find out how good people are at evaluating candidates with limited information as part of our research into personnel selection processes and decision-making. This research is concerned with evaluating the value of candidate assessment, with and without interview. One of these candidates was preferred after being interviewed. In this research we are interested in finding out whether judges who evaluate this application information alone without interview come to similar conclusions. You will be presented with two candidates to fill a job opening at the university are listed below. This is for a position in the Teaching Unit of the Physics department: 70% teaching, 20% research, 10% admin. We would like to ask your opinion through this survey by asking who you would choose and why. Consider two important sets of information from these candidates from their application, namely the reference letters from their referees (extracts specifically in relation to their teaching) and from their application letter.

Here are the summaries of key point from the reference letters of the two candidates, followed by extracts from their application letters:

Candidate 1:

She has had a lot of international research experience and currently lives locally. She has always been a hard worker but can sometimes be a little nervous while talking to larger groups. She is attuned to the needs of her students making her a good listener. She also enjoys receiving feedback and incorporates it in her work.

Candidate 2:

He has always been very keen on helping his coworkers/colleagues. He has addressed very interesting topics in his research, but can be very absorbed by that at times. He prepares his presentations very well and enjoys answering questions. He is an honest, modest person and a fine colleague to work with.

Here are extracts of the application letters for both candidates:

Candidate 1:

“I have always had a big interest in teaching.”

“Throughout my career, I have given many guest lectures which has led me to acquire a taste for teaching.”

“I am also very excited and motivated to start as a lecturer.”

“I am 28 years old and I have worked and studied in several different countries. This has led me to have a better understanding of foreign students and their experience as a foreign student here in the Netherlands.”

My teaching philosophy: “As a teacher, I want to share my passion with students and hope they will come to share this passion.”

Candidate 2:

“I am 29 years old and have 4 years of experience in teaching.”

“After obtaining my degree at the University of Oxford, I have taught at the University of Birmingham.”

“I have chosen to return to the Netherlands due to my roots being there”

My teaching philosophy: “My favourite aspect about teaching is interacting with the students, answering their questions and discussing topics with them.”

“I believe I can share the joys of research with students and prepare them for being researchers themselves.”

1. How much do you like candidate 1? (answers ranging on a 7-point Likert scale with the labels: “Not at all” to “Very much”, from left to right). The scale was the same for all items.

2. How much do you like candidate 2?

3. In your opinion, how qualified is candidate 1?

4. In your opinion, how qualified is candidate 2?

5. How likely would you recommend to hire candidate 1?

6. How likely would you recommend to hire candidate 2?

7. Which candidate would be the most suited for the job in your opinion? (2 answers options: candidate 1 or candidate 2)

Study 2: A new Nestor?

A software development Company NEXA has recently developed a new software system specifically for universities. The RUG is considering to replace the Student Portal (Nestor) next year with a new website called StudyUI. Through a survey that we conducted, we discovered that a high percentage of students was dissatisfied with Nestor. This has negatively impacted the student ratings of the University of Groningen. Due to the high dissatisfaction rate, the university has been looking into alternative software systems. However, this new website will have a lot of transition and other costs associated with the implementation. The university has enlisted a bachelor student group to examine students' thoughts on this new software (as they have close affinity with the concerns of other students). The goal of the following questions is to discover whether the new website is preferred over the old website. Some of the differences between Student Portal and StudyUI are a difference in layout, colours, technology, and an additional bar and a StudyUI app that can be accessed on your phone and tablet. The app has a replacement with a built-in authenticator and schedule that is generated on its own. Psychology students were generally in favour, however economic students were more skeptical as they were concerned with the costs of the new software.

*One of the 2 manipulations was showed to the participant (weak vs strong arguments)

Strong arguments condition

Here are some quotes from the psychology students that were asked:

“StudyUI can be accessed through a phone application, enabling me to look at my grades, courses and emails anywhere at any time which increases my accessibility and ensures that I have a backup.”

“I think the search bar looks more sophisticated, but more importantly, it helps me as a student to find information quicker.”

“I think the website has a better design and functionality, as well as being more organised and helps me find information more easily.”

Weak arguments condition

Here are some quotes from the psychology students that were asked:

“I enjoy the new layout as it is different from the previous one, I was using.”

“In my opinion, the new search bar looks more professional and cleaner.”

“The website is up to date and new, which I think is always a pleasant thing to have.”

Based on the information you have seen, please tell us what you think about StudyUI by indicating your (dis)agreement with the following statements.

I am willing to try this new software. (answers ranging on a 7-point Likert scale with the labels: ‘‘Strongly disagree’’, ‘‘Disagree’’, ‘‘Somewhat disagree’’, ‘‘Neither agree nor disagree’’, ‘‘Somewhat agree’’, ‘‘Agree’’, ‘‘Strongly agree’’ from left to right). The scale was the same for all items.

1. I think this software is promising.

2. I think this software is valuable.

3. I would recommend others to try this software package.

4. I would go out of my way to try this new software.

5. I feel persuaded to give this software a chance.

6. I think this new software will make the site easier to use.

7. I am more willing to use StudyUI as I am/was willing to use the current site.

8. I think I will benefit from using this new software, in contrast to (keep on) using the existing site.

9. If this is good enough for the people who have used it in the research study (focus group), it is good enough for me.

Please indicate your gender

Male

Female

Non-binary / Third gender

Prefer not to say

Please indicate your nationality

Dutch

German

Other (please indicate)

Debriefing

Thank you for taking the time to participate in our research. As you know this consisted of two studies that we describe as unrelated, although we were actually interested if there might be a potential relation between them. In the “new Nestor” study we manipulated the strength of the arguments presented and also whether the second study (your views on which lecturers to hire) was presented before or after we asked for your opinions about Nestor. This resulted in participants being allocated to one of four different conditions, with either strong or weak arguments and either the hiring task before or after giving their opinion on Nestor. We measured the degree of social influence resulting from reading the arguments about the new Nestor interface and expected that people are more influenced by strong than weak arguments. Additionally, the hiring task was designed to put participants in more critical mindset for evaluating information, so if this task was completed before the Nestor task, we predicted that the difference in persuasion between strong vs. weak arguments would be even greater than when the hiring task came second (and couldn’t therefore influence the mindset).

Furthermore, we expect that people are more influenced if they highly identify with other psychology students, since the arguments are presented as emanating from other psychology students from a focus group. We hope you understand why we could not provide full information about our intentions behind these tasks and connection between them earlier on (as this might influence your answers by eliminating the experimental differences). Meanwhile we hope this research was of interest and thank you again for your participation!

If you have any questions or comments, feel free to ask us now in the space provided or contact us via (email address here). Because other students may be participating

in this study in the future, we ask that you do not discuss the details of this study with other Students.

Appendix B

Manipulations & Pilot study?

The experimental manipulations are shown below.

Condition (1): Strong arguments (Informational focus)

Condition (2): Weak arguments (Informational focus)

Condition (3): Strong arguments (No informational focus)

Condition (4): Weak arguments (No informational focus)

2x2

grouped into the 2 indep var derived from the four conditions: argument strength and info focus (salient and non)

Mod group dentification and cog

Main effects Argument strength and info focus (salience of critical thinking (before after)

Appendix C

Pilot study

Questionnaire:

For our research on social influence, we developed an introduction and arguments. We will ask you whether the introduction is believable and if you have any notes on how we could improve it. We would also like to ask you to rate these arguments on how convincing they are as well as how credible you think these arguments are.

Proposed introduction (referred to as “Cover story” below):

A software development Company NEXA has recently developed a new software system specifically for universities. The RUG is considering to replace the Student Portal (Nestor) next year with a new website called StudyUI. Through a survey that we conducted, we discovered that a high percentage of students were dissatisfied with Nestor. This has negatively impacted the student ratings of the University of Groningen. Due to the high dissatisfaction rate, the university has been looking into alternative software systems. However, this new website will have a lot of transition and other costs associated with the implementation. The university has enlisted a bachelor student group to examine students’ thoughts on this new software (as they have close affinity with the concerns of other students). The goal of the following questions is to discover whether the new website is

preferred over the old website. Some of the differences between Student Portal and StudyUI are a difference in layout, colours, technology, and an additional bar and a StudyUI app that can be accessed on your phone and tablet. The app has a replacement with a built-in authenticator and schedule that is generated on its own. Psychology students were generally in favour, however economic students were more skeptical as they were concerned with the costs of the new software.

Q1a: How believable is the cover story? (1 = Not at all believable, 7 = Very believable)

1 2 3 4 5 6 7

Q1b: Do you have any suggestions on how to improve the cover story?

Some students have already used the new website. Psychology students have tested some of the new features. Here are some of their opinions about StudyUI:

Q2: We are interested in whether these arguments come across as convincing (i.e., would they convince you to try the new website?).

How strong/convincing are the following arguments? (1 = Weak/Not at all convincing, 7 = Very strong/convincing)

1. “The website can be accessed through a phone application, so I can look at my grades and my emails in my free time.”

Very weak 1 2 3 4 5 6 7 Very strong

2. “StudyUI can be accessed through a phone application, enabling students to look at their grades, courses and emails anywhere at any time which increases their accessibility and ensures that I have a backup.”

3. “The colour palette is well thought out because it helps me focus on the important information.”

4. “I enjoy the new layout as it is different from the previous one, I was using.”

5. “I heard a rumour that the software is cheaper to maintain which means we can all have a free beer by the end of the year.”

6. “The Website uses the latest software meaning it runs smoothly on my platforms (Mac, PC, desktop, laptop).”

7. “The schedule is automatically updated according to my enrolments meaning I will never miss classes due to my schedule ever again.”

8. “Innovation is the future, and new is better, so why not try it out?”

9. “The authenticator is included in the application and I do not need another device to log in.”

10. “I think the search bar looks more sophisticated, but more importantly, it helps me as a student to find information quicker.”

11. “In my opinion, the new search bar looks more professional and cleaner.”

12. “The website is up to date and new, which I think is always a pleasant thing to have.”

13. “I think the website has a better design and functionality, as well as being more organised and helps me find information more easily.”

14. “I like the colours of StudyUI, because these are my favourite colours.”

Q3: We are interested in whether these arguments come across as credible (i.e., something you could imagine a student might say). How credible (realistic) is this argument? (1 = Not credible at all, 7 = Very)

1. “The website can be accessed through a phone application, so I can look at my grades and my emails in my free time.”

Not credible 1 2 3 4 5 6 7 Very credible

2. “StudyUI can be accessed through a phone application, enabling students to look at their grades, courses and emails anywhere at any time which increases their accessibility and ensures that I have a backup.”

3. “The colour palette is well thought out because it helps me focus on the important information.”

4. “I enjoy the new layout as it is different from the previous one, I was using.”

5. “I heard a rumour that the software is cheaper to maintain which means we can all have a free beer by the end of the year.”

6. “The Website uses the latest software meaning it runs smoothly on my platforms (Mac, PC, desktop, laptop).”

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12. “The website is up to date and new, which I think is always a pleasant thing to have.”

13. “I think the website has a better design and functionality, as well as being more organised and helps me find information more easily.”

14. “I like the colours of StudyUI, because these are my favourite colours.”

Out of these fourteen arguments we firstly removed the arguments with a low credibility. After that, we selected the three strongest and three weakest arguments to use in our main research.