Integrating Informational influence and Referent Informational Influence Into One Comprehensive Model: Finding Empirical Evidence For The Three-Realms Model

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Abstract

Social influence plays a substantial role in everyday life, with research revealing three different process or routes: Normative Influence, Informational Influence (Deutsch & Gerard, 1955), and Referent Informational Influence (Turner, 1982). The aim of this paper is to build upon prior research that tried to integrate these influences in 1 model, The 'Three-Realms Integrative Model of Social Influence' (Spears, 2021). The experiment consists of 2 manipulated variables and one moderator, respectively being Strong versus weak arguments (informational influence; other/outward focus), a low versus high group identification manipulation (Referent Informational Influence; group-self focus), and measured identity (Referent Informational Influence; group-self focus). The novelty of this study is that group identity is manipulated as well as measured, in contrast with prior research. Based on the Three-Realms model, we hypothesize that strong arguments are better at influencing participants than weak arguments, and that participants manipulated to be high identifiers are influenced to a greater extent than participants manipulated to be low identifiers. We also expect the identity manipulation to interact with argument strength, thus leading to a diminished difference between strong and weak arguments when participants are manipulated to identify high, as opposed to low. Results partly support these hypotheses, with strong arguments being better at influencing than weak arguments, and high identifiers being influenced to a greater extent than low identifiers, but only under certain conditions. The predicted interaction effect was not found, but measured identification was more strongly predictive of influence (irrespective of argument strength) when group identification was manipulated to be high. We conclude that further research is necessary to support the model with causal evidence, however, the data reveal promising results.

Introduction

An important aspect of ones' life is the groups we identify with. These groups, such as colleagues, fellow students, or friends, exert influence over us. A substantial amount of research has been conducted to uncover the inner workings of social influence (Deutsch & Gerard, 1955; Tajfel & Turner, 1979; Turner, 1985; Turner, 1987; Turner, 1991; Yerasani et al., 2019). This paper discusses some of this research, while going more in depth about when the different forms of social influences activate, and why. More specifically, we aim to find causal evidence for the Three-Realms Integrative Model of Social Influence (Spears, 2021), by researching Informational Influence and Referent Informational Influence.

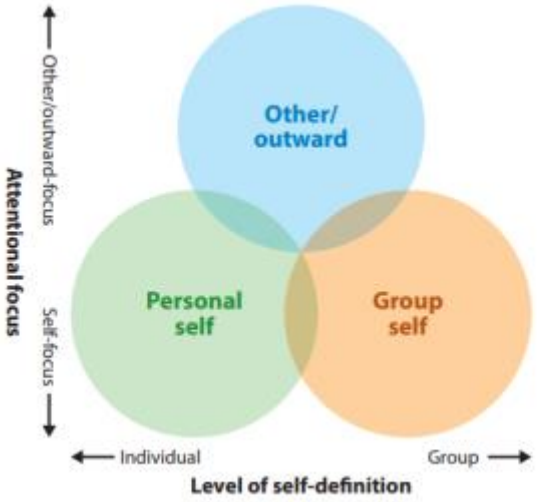
The first approach comes from Deutsch and Gerard (1955), who stated that there are two different types of social influence: Normative influence (NI) and Informational Influence (II). Normative influence states that individuals comply with groups to which they belong, because they want to gain rewards, or avoid punishment by going along with the source. While NI is activated in a group setting, Deutsch & Gerard defined the group as being external to the individual, resulting in no 'true influence' (influence where the information is internalised), as according to SCT/RII (see below) there needs to be identification with the group for this to occur. So 'true influence' could never be achieved through NI. (Spears, 2021). On the other hand, II does truly influence an individual. This influence occurs through valid information, for example a strong argument. Evidently, these theories make a clear distinction between influence via the group, and influence via information. Turner (1991) challenged this distinction by introducing the concept of Referent Informational Influence (RII). Stemming from Self-Categorisation Theory (SCT; Turner, 1987), RII states that 'true' influence can result from a group source. This is explained through the fact that individuals identify with certain groups, which leads to these individuals seeing themselves as part of the group, and the group as part of them. This means that the information from the group could be

seen as information coming from ‘within’ so to speak and thus is trusted and believed (Spears, 2021). In other words, RII truly influences individuals through information from an ingroup. As is apparent, Deutsch and Gerard (1955) and Turner (1991) contradict each other, with the former stating that information and group are two separate channels of influence, while the latter states that information and group are intertwined. This brings us to the 3-Realms Integrative Model of Social Influence, designed to integrate the different forms of influence in a conceptual scheme (Figure 1; Spears, 2021). Instead of looking at the three influences as incompatible, or as competition to each other, Spears proposes a model in which these influences each activate in a different situation. He argues that the real world is too complex for situations with just a singular process (Werkman, 2021), thus he proposes that there is an interplay between the social influences, with each influence being represented by a circle or domain in the model. The goal here is to find evidence for the model, and more specifically, for the other/outward focus (corresponding to Informational Influence) and the group-self focus (Corresponding to RII). In other words, when do the different foci, and influences activate, do these foci interact with each other, and what moderators play a role in the model?

In the next section, the different foci are explained, as well as linked to the corresponding influence.

Figure 1

The Three-Realms Integrative Model of Social Influence (Spears, 2021)



Other/outward focus

The other/outward focus becomes salient when the focus is not on the self, removing the need to protect the self (Spears, 2021). This absence of focus on the self results in individuals paying more attention to the information, for example to arguments, thus the informational influence is tightly linked to the other/outward focus. As stated, informational influence occurs through information, individuals process this information, and become genuinely influenced (Deutsch & Gerard, 1955), resulting in the internalisation of the information. To examine the other/outward focus and informational influence, we implemented weak and strong arguments, to examine whether strong arguments are better at convincing individuals than weak arguments. We expect that strong arguments are indeed better at convincing individuals than weak arguments, as, according to Deutsch and Gerard (1955). Thus, if the strong arguments are good at depicting something in a positive light, in contrast with the weak arguments, the strong arguments should be more convincing, resulting in proof for the other/outward focus and informational influence.

Additionally, various previous experiments indicate that strong arguments are more convincing than weak arguments (Petty & Cacioppo, 1986; Eagly & Chaiken, 1993; Werkman, 2021; Kuis et al., 2022)

Following these points, we expect the following main effect: *Hypothesis (1)* I*ndividuals will be convinced more by strong arguments than by weak arguments.*

Personal self-focus

When the focus is on the self, and more specifically, on the self as an individual, we speak of the personal self-focus (Spears 2021). This focus dictates that one sees themselves as an individual in a group, as opposed to seeing themselves as 'at one' with the group (sometimes referred to by social identity researchers as "the individual within the group vs the group within the individual"). Thus, the group does not have 'true' influence over the individual (as argued in RII; Turner, 1991), but rather, the individual complies with the group to avoid punishments or gain rewards (i.e. compliance rather than conformity). The personal self-focus is in line with normative influence (Deutsch & Gerard, 1955), which states that the individual does indeed not get truly influenced by the group, but goes along with it to defend or improve their position. In other words, the personal self-focus (and normative influence) contrasts the other/outward focus (and informational influence) by 1) shifting the focus of influence from the information itself to the group providing it, and 2) by not being 'true' influence, as individuals are less likely to privately accept the information.

Seeing as this part of the three realms model (Spears, 2021) is not tested in the current experiment, it is merely mentioned to paint the whole picture, no hypotheses are added.

Group self-focus

The last realm concerns the group self-focus, where ones' shared identity with a group becomes salient, such as psychologists, students, or any other group (Spears, 2021). Sharing this identity means that an individual identifies with that group, seeing themself as part of it. This realm differs from the previous realms, as it combines the influence of both information and group into one influence: Referent informational Influence (RII; Turner, 1982). As mentioned, RII works through information provided by a group the individual identifies with. The individual is truly influenced by the information, in contrast with normative influence, because the individual sees themself as part of the group, and the group as part of themselves (Spears, 2021), and therefore is more likely to trust information deriving from like-minded group members, and perceive it as valid. RII stems from the social identity approach (Tajfel, 1978; Tajfel & Turner, 1979; Turner, 1985), and more specifically, Self Categorisation Theory (SCT; Turner, 1987). Summarised, SCT states that individuals identify with certain groups, occurring through the fact that we have internalised group identities (Werkman, 2021; Spears, 2021). This group identification could lead to the individual being influenced by said group.

An important moderator of the group self-focus and RII is the extent of which the individual identifies with the group(s) (Spears, 2021). Various research studies show that individuals who identify strongly with a group are more likely to adhere to the group needs and wants (Leach et al., 2008) than people who identify less strongly. This becomes apparent in the three realms model with the distinction between the personal self-realm and the group self-realm (Spears, 2021). While both realms are related to groups, the group self-realm activates when you identify with the group, and the more you identify with the group, the stronger the group-self realm activates (Leach et al., 2008; Spears, 2021, leading to RII (corresponding to the group self) instead of Normative Influence (corresponding to the personal self), which leads us to the following hypothesis (see method section for the identity

manipulation): *(2a) Participants who are manipulated to identify highly with psychology students will be influenced to a greater extent than participants who are manipulated to identify lowly with psychology students.* And *(2b) Participants who have a high measured identification towards psychology students will be influenced to a greater extent than participants who have a low measured identification towards psychology students.*

Last, when an individual identifies highly with a certain group, the information (i.e. argument) itself shifts to the background, as more attention is paid to the source (the group), as opposed to when an individual identifies lowly (Spears, 2021; Werkman, 2021). Relating this to the Three Realms model, Spears (2021) states that the other/outward focus is only active when there are no concerns with identity. In other words, when the type of influence is just information, and nothing else, one shifts towards the other/outward focus. This means that as soon as the information is provided by a group one identifies with, the focus shifts from other/outward to the group self, resulting in less to no attention paid to the content of the message, leading to the last hypothesis: *(3) The difference of persuasiveness between strong and weak arguments is lower when participants identify highly, than when they identify lowly.*

Manipulated identification

A key point is that this paper aims to find causal evidence for the Three-Realms model (Spears, 2021), and the role of group-identity based influence in particular. Previous research (Werkman, 2021, Kuis et al., 2022) provides some evidence for the model, but no clear conclusions can be made, as this research was correlational. By manipulating the identification of the participants, we aim to remove any confounding factors, resulting in a more compelling conclusion on the causality question.

Method

Participants & Design

The research consisted of 299 participants (75% female, 25% male) from the University of Groningen (RUG), with the age ranging from 17 to 35 years old, with the bulk of age lying between 18 and 22 years old. The study was ethically approved by the RUG ethics committee, after which it was activated on SONA, a site where first year psychology students participate in studies in order to receive SONA-credits, which are needed to pass certain courses. The study was in English, meaning that both Dutch and International Psychology students were able to participate. Furthermore, the participants were able to participate in the research from any place, as the study was online. Participants received 0.6 SONA-points for completing this study.

For this study, a 2 (Weak arguments vs Strong arguments) x 2 (manipulated low identification vs manipulated high identification) between participants design was used. Measured identification functioned as an additional moderator.

Materials & Procedure

The study was conducted through *Qualtrics*, a site on which you can make surveys. This produces a link that can be utilised on SONA, resulting in an intuitive experience for the participants. The participants were randomly assigned to the four conditions by using the 'randomizer' option in Qualtrics.

After consenting to participating in the study, participants were assigned to one of two experimental conditions: either designed to make them think that they strongly identify with being a psychology student, or that they weakly identify with being a psychology student. Using the linguistic manipulation technique (Salancik, 1974; Jetten et al., 1997), the participants were tasked with checking the boxes on which they agreed. The point is that the

statements were written in a way that the weakly identifying group would likely agree with more negative statements than positive ones, and vice versa for the strongly identifying group. For example, the participants in the weak identifier condition received the statement: 'some courses are different from what I expected', (designed to evoke agreement, thus suggesting dissatisfaction and hence weak identification) while participants assigned to the strong identification condition were asked: 'most courses are different from what I expected', (designed to evoke disagreement, suggesting satisfaction and stronger identification), resulting in a longer checklist of negative points for the weak identifiers, and a shorter list of negative points for the strong identifiers, and vice versa for positive points (See appendix 1). After this, the weak identifier group got a message that they identify more weakly with psychology students than 73% of the other participants, while the strong identifier group got the message that they identify more strongly than 73% of the other participants, completing the manipulation.

This leads us to the cover story. Participants were led to believe that a new statistical software program named 'ProxStat' was being tested by a small group of RUG students and Staff, after which it might be implemented at the RUG (Werkman, 2021; see Appendix 1 for the full cover story). This fake cover story was followed by two conditions: the first condition consisted of weak arguments being provided by RUG psychology students and RUG psychology staff members, while the second condition consisted of strong arguments provided by the same people. For example, one of the weak arguments is: 'Time tells us that new and innovating software turns out the be the best! New is better!' while one of the strong arguments is: 'As well as the development of the software itself, the company behind the package has invested considerably in user support to ensure fast responsiveness to any user problems and glitches.' (Werkman, 2021).

Following, the participants were asked what they thought about the new (fake) statistical software; 11 questions ranging from if 'they were willing to try the new software' to if 'they would recommend the new software to others' (Appendix 1). The participants were also asked to indicate what they thought of the people that allegedly already tested the statistical software. This part consisted of 12 items such as 'How typical of psychology students do you think the individuals who tested the software were?' and items where participants had to indicate the warmth, competence, and friendliness among other things of the people who tested the software (appendix 1).

Next, participants filled in the group identification scale of Leach et al. (2008) adjusted to the psychology students group, followed by demographics such as age and gender. Lastly, Participants had to fill in a few manipulation checks, which will be discussed in the next part. And of course, the participants were debriefed on the fact that the cover story was fake (Appendix 1)

Measures

The survey made use of two different measures, the main measure – and also the dependent variable – being the level of influence of the 'Proxstat' cover story and the arguments (Werkman, 2021), with the secondary measure (the moderator) being the identification towards psychology (Leach et al., 2008).

The level of influence measure consists of ten questions designed by Werkman (2021) for this specific research, where participants had to indicate on a 7-point Likert scale, ranging from 'strongly disagree' to 'strongly agree', relating to what they thought of the new 'ProxStat' software. Example questions are 'I would go out of my way to try this new software' and 'I am more willing to try ProxStat as I am/was willing to try existing packages

like SPSS or R' (see Appendix 1). As for the internal reliability of the scale, the Cronbach's Alpha was .853.

Next, the identification of the participants towards psychology students was measured, with a slightly altered Leach et al. (2008) identification scale (see Appendix 1). The scale consists of 14 questions related to one's identification with a certain group, in this case the psychology students group. Similar to the previous measure, participants had to answer on a 7-point Likert scale, ranging from 'strongly disagree' to 'strongly agree'. Examples of the questions are 'I feel a bond with psychology students' and 'It is pleasant to be a psychology student' (see Appendix 1). The Cronbach's Alpha of this scale is .892, once again indicating that the scale is internally reliable.

Last, to see what part of the population participated in the experiment, the survey included some demographics, such as age, gender and nationality.

Manipulation checks

As mentioned, the survey included several manipulation checks, to ensure that the manipulations achieved the desired effect.

First, right after the identity manipulation, a check was implemented, asking the participants to indicate to what extent they identify with psychology students, according to the feedback (See appendix 1). This was a so-called "weak check" (to confirm they understood the feedback). Next up, right after the arguments relating to the 'ProxStat' cover story, another manipulation check was implemented. This check asked the participants how strong and how credible they thought the arguments were (Appendix 1), assessing whether the participants from the weak arguments condition saw the arguments as weaker than the participants from the strong arguments condition. Lastly, at the end of the survey various questions related to

suspicions were added, in the form of a 'funnel debriefing'. It started with unassuming questions such as 'Do you have any general comments about the study, and what it was about?' while becoming more specific later 'Are there any aspects of the study that aroused your suspicion?' (Appendix 1). This was done to realise the opportunity to filter out participants who were suspicious of the various manipulations.

Results

The participants were 271 first year psychology students of the university of Groningen. In total 28 cases were removed. Six cases were removed, as the data was missing, as for the rest of the cases, see below.

Manipulation checks

As mentioned above, various manipulation checks were added. First, a check that verified if the participants paid attention to their manipulated identification (strong vs. weak) was conducted. This resulted in 22 participants being filtered out, as it indicated that they did not pay attention to what identification group they belonged to.

Second, to ensure that the weak arguments are actually seen as weaker than the strong arguments, a check was implemented where participants had to indicate how strong and credible they thought the arguments from the cover story were. By comparing the means it is confirmed that the weak arguments are indeed weaker and less credible (*mean* strength = 3.78, *SE* = 1.33; *mean* credibility = 3.66, *SE* = 1.32; F(1, 269 = 44,797, $p < .001$) than the strong arguments (*mean* strength = 5.02, *SE* = .97; *mean* credibility = 4.62, *SE* = 1.02), (Strength: F(1, 269 = 76,276, $p < .001$; Credibility: F(1, 269 = 44,797, $p < .001$).

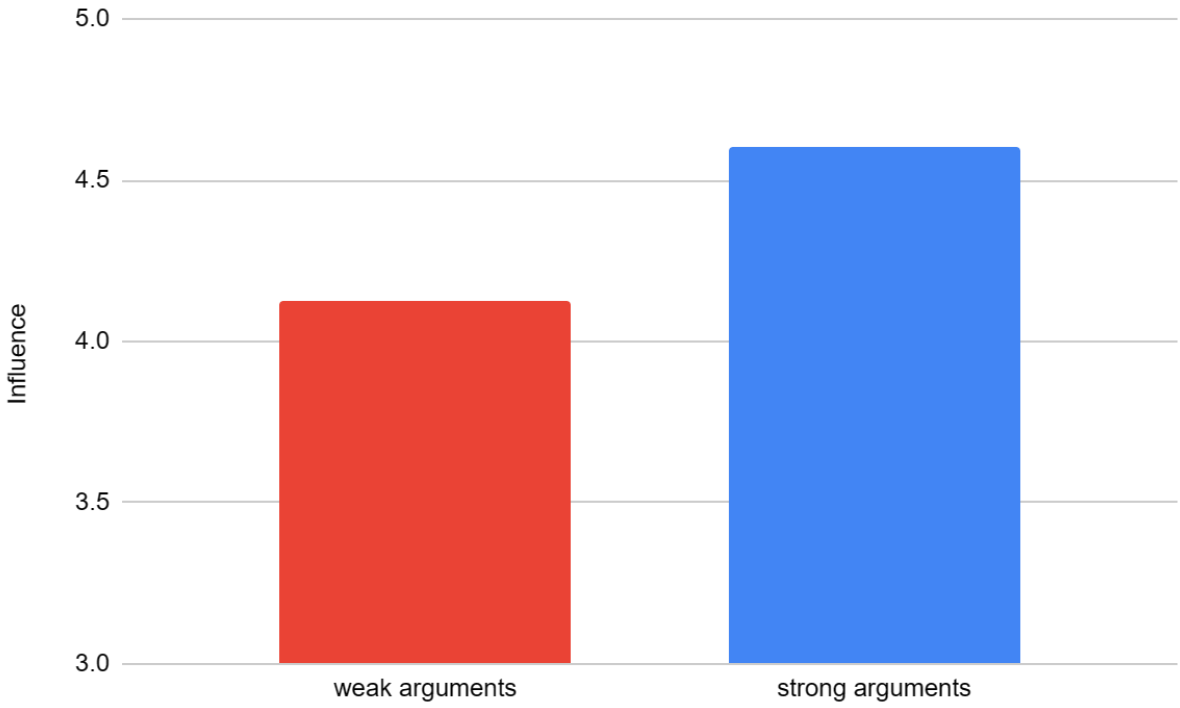
Last, the survey included a funnel debriefing at the end, gauging to what extent the participants were suspicious of the study as a whole, and specific subparts such as the identity manipulation. We examine this in the exploratory analysis section.

Main analysis

An analysis of variance (ANOVA) shows that the main effect of argument strength on influence (dependent variable; $F(1, 269) = 27.590$, $p < .001$) is in line with hypothesis 1, which states that participants will be more influenced (and thus more likely to try the new software) by strong arguments than by weak arguments. The mean of social influence in the weak arguments condition ($M = 4.127$, $SE = .064$) is indeed lower than the mean of influence in the strong argument condition ($M = 4.606$, $SE = .066$; see Figure 2). This indicates that strong arguments are better at influencing people than weak arguments, in line with previous research (Werkman, 2021).

Figure 2

The effect of argument strength on the influence.



Note. The red bar represents the participants who were put in the 'weak argument' condition, the blue bar represents the participants who were put in the 'strong arguments' condition, and their answers on the dependent variable scale 'influence' which ranged from 1 to 7.

Next, the main effect of identity manipulation on influence was unsuccessful ($F(1, 269) = .088$, ns), as was the interaction effect between argument strength and identification manipulation on influence ($F(1, 269) = .001$, ns). Therefore, the hypotheses 2) 'participants from the high identity manipulation group will be more influenced than participants from the low identity group' and 3) 'The difference in persuasiveness between strong and weak arguments diminishes in the high manipulated identity group, while it increases in the low manipulated identity group' are not supported by the data. However, by removing participants that were suspicious of the survey, as indicated by the funnel debriefing, the means of the

identification manipulation point in the right direction, which is further discussed in the exploratory analysis part.

Last, the measured identification (Leach et al., 2008) shows a significant effect ($R(269) = .312$, $p < .001$). The effect is positive; the higher the measured identification, the higher the influence of the cover story and arguments. This is in line with hypothesis 4, which states that the higher the measured identity of a participant is, the more they are influenced by the arguments. Contrary to hypothesis 5, there is no interaction effect between measured identification and argument strength ($F(1, 269) = .094$, ns), meaning that there is no support that higher measured identity diminishes the difference between weak and strong arguments, and vice versa increases the difference between weak and strong arguments when measured identity is lower.

Exploratory analysis excluding suspicious participants

The exploratory analysis consists of 155 participants. 116 cases were removed from the data, because these participants indicated that they were suspicious of one or more aspects of the experiment. The funnel debriefing consisted of questions such as 'What did you think of the information on the new statistical software package and the arguments provided by psychology students?' and 'Are there any aspects of the study that aroused your suspicion?' (see appendix 1). An example of answers that deemed the participants suspicious are 'It was obviously fake' and 'As stated previously, it didn't seem as legitimate'.

In the following part hypothesis 2 will be analysed once more, without the suspicious participants. We expect that the results are more in line with hypothesis 2, which in brief states that 'high manipulated identifiers are more influenced than low manipulated identifiers', because suspicious participants are more likely to ignore the identity manipulation, to the extent that they do not believe in it. Second, we will be looking at the interaction effect of measured identity and manipulated identity on influence, leading to an

exploratory hypothesis: participants with congruent measured and manipulated identity show the strongest results, while participants with incongruent measured and manipulated identity will be more influenced by the measured identity, which is in line with their experience and (as the main effect already shows) more powerful. In other words, participants with both high manipulated identity and high measured identity are predicted to be influenced to the greatest extent, and if a participant has high manipulated identity but low measured identity, the measured identity will be stronger leading to a low(er) influence.

Identity manipulation & measured identity

As briefly mentioned, when using the filtered dataset, the identity manipulation effect on influence has the means pointed in the right direction, with the low identification group having a mean of 4.346 (SE = .082) and the high identification group having a mean of 4.551 (SE = .081), as well as the effect being marginally significant ($F(1,157) = 3.178$, $p = .077$). Thus, these results are in line with hypothesis 2, which states that high manipulated identifiers will be more influenced by arguments than low manipulated identifiers. The cause of the difference between filtered and non-filtered data is ambiguous, as will be discussed in the discussion section. The reason for categorising the following analysis as exploratory is because the data filtering violates the random allocation to condition assumption, thus it is hard to call this study a non-biased or "true" experiment. More of this in the discussion section.

Next, the interaction effect of measured identity and manipulated identity on the influence of the cover story was analysed, resulting in a significant interaction ($F(1, 157) = 4.695$, $p = .032$). This was not discussed in the pre-registration, and it is also not the aim of this study, but the results are interesting nonetheless. Figure 1 illustrates the interaction effect. First, participants that identify low (on measured identification), were even less influenced by

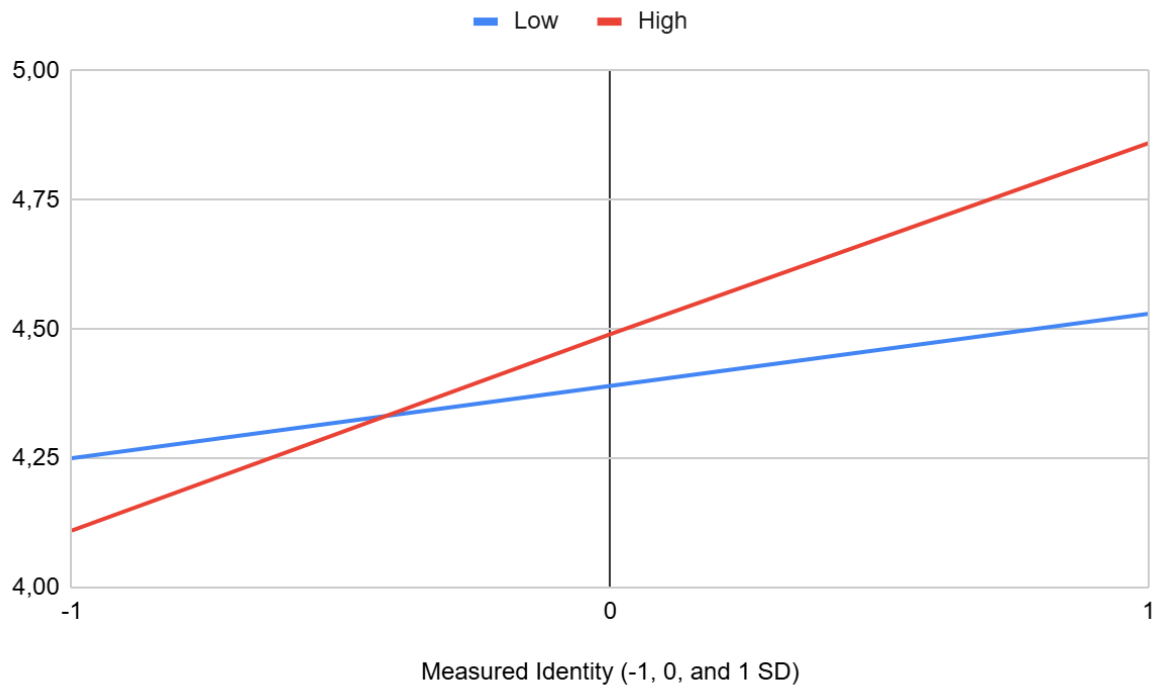
the arguments and cover story if they are manipulated to be a high identifier, than if they are manipulated to be a low identifier. For participants who score at the mean/average on measured identification the difference between being manipulated into the low or high identifier group is minimal, with a slightly higher influence if they are in the high manipulated identity group. Last, participants with a high measured identification level show a substantial rise in influence from the low manipulated identity group to the high manipulated identity group.

The hypothesis is partly supported by the data, as high measured and manipulated identity does exercise the most influence. However, if you look at the low measured identity, participants are even less influenced when they are put in the high manipulated identity group. This could mean that the incongruent identities make the story less believable, leading to an even lower influence.

Furthermore, the figure suggests that the identity manipulation is effective (i.e. in terms of predicted influence' when participants have a high measured identity, but not when they have a low measured identity. The discussion will go into more depth on these issues.

Figure 3

Interaction effect of measured identity and manipulated identity on the influence of the arguments.



Note. The graph represents the interaction effect of measured identity and manipulated identity on the influence of the arguments. The influence scale ranged from 1 to 7. The blue line represents the participants that were manipulated to identify lowly with psychology students, the red line the participants that were manipulated to identify highly with psychology students.

Discussion

This research aimed to find empirical evidence for the Three Realms Integrative Model of Social Influence (Spears, 2021). Although the main effect of argument strength, and the moderation effect of measured identity were significant, and in line with the hypotheses, we did not find any evidence for the main effect of manipulated identity. Furthermore, no empirical evidence is found for the interaction effect of measured identity and argument strength on influence. In the next section the implications are discussed, as well as limitations and possible further research.

As predicted by hypothesis 1, strong arguments are better at influencing individuals than weak arguments. This is in line with previous research (Petty & Cacioppo, 1986; Eagly & Chaiken, 1993; Werkman, 2021; Kuis et al., 2022) and reinforces a strong foundation for the other/outward focus, since objective information is the prominent factor in this realm, in this case the argument strength.

However, no effect between manipulated or measured identity and argument strength was found. This contrasts with hypotheses 3, which state that the difference in influence between weak and strong arguments diminishes when individuals identify strongly with the provider of the arguments. In other words, we expected that strongly identifying individuals would pay less attention to the strength (or content) of the arguments, because they obtained the information from their in-group, resulting in a different way of processing the information (related to the group-self). Thus, we expected the focus to shift from other/outward, to the group-self, however, we did not find any evidence to support this claim.

Furthermore, manipulated identity did not produce a significant main effect, contrary to the prediction of hypothesis 2a, which states that individuals that were manipulated to identify strongly with the provider of the arguments, would be influenced to a greater extent than individuals that were manipulated to identify weakly with the provider of the arguments. Seeing as previous research on moderated identity (Werkman, 2021) did find evidence for hypothesis 2a, as well as the strong notion that identification plays a substantial role in social influence (Spears, 2021), one possibility is that the manipulation did not work as intended. To build on this, the moderation effect of measured identity on influence is in line with hypothesis 2b; the higher an individual identifies with the provider of the arguments, the more likely they are to be influenced by the arguments. Relating this to the Three realms model (Spears, 2021), the group-self focus is partially supported, as the measured identity moderation did work as expected, but the identity manipulation did not.

Summarised, strong empirical evidence is found for the separate realms of the three realms model (Spears, 2021), other/outward focus and group-self focus. As for the group-self focus, no causality conclusions can be made, as the identity manipulation did not work as intended, however, as mentioned above, the measured identity did show a significant expected result (see also Werkman, 2021). Furthermore, seeing as there is no interaction effect between the main variables of identity (measured and manipulated) and argument strength on influence, further research is needed to discover more information on the interactions between the realms.

Exploratory analyses

By filtering out the 'suspicious' participants, an almost significant effect of manipulated identity on influence was found, with the means pointing in the right direction. This is in line with hypothesis 2a, which states that participants who are manipulated to identify strongly with psychology are more likely to be influenced by the story and arguments than participants who are manipulated to identify weakly with psychology. Of course, by filtering out participants in such a way one opens up the remaining sample to selection biases, and the sample is not random anymore. Nevertheless, this result suggests that manipulated identity could play a role in social influence, and it displays the first steps to causal evidence for the group-self focus of the Three realms model (Spears, 2021).

Moreover in the exploratory analyses, an interaction effect of measured identity and manipulated identity on the influence of the cover story and arguments was found. We hypothesised that participants with congruent manipulated identity and measured identity would be influenced either the strongest or weakest - with high measured and manipulated identity being influenced the strongest, and low measured and manipulated identity being influenced the weakest - as opposed to incongruent measured and manipulated identity. For example, a participant who has a high measured identity, but is manipulated to have a low

identity would be influenced to a greater extent than a congruent low measured and manipulated identity participant but would be influenced to a smaller extent than a high measured and manipulated identity participant. This hypothesis is partly supported, the high measured and manipulated identity participants are indeed most likely to be influenced, however, the low measured and manipulated identity participants are not the least likely to be influenced. This spot is taken by the low measured but high manipulated identity participants.

Furthermore, we hypothesised that measured identity would be stronger than manipulated identity, meaning that a participant with a high measured identity, but a low manipulated identity would be influenced to a greater extent than a participant with a low measured identity, but a high manipulated identity. This is supported by the data, high measured identity participants are always influenced to a greater extent than low measured identity participants, regardless of their manipulated identity, indicating that measured identity is the stronger of the two. Furthermore, this indicates that the identity manipulation was only partly successful, as it should override the initial identity conceptions of the participants. This only happened in the high measured identity group, but not in the low measured identity group.

Limitations

The main limitation of this study is that the manipulation of identity did not produce the predicted results. As mentioned, a substantial number of participants were ‘suspicious’ towards the manipulation, resulting in a non-significant main effect and failure to find evidence for the three realms model (Spears 2021). Of course, by filtering out the ‘suspicious’ participants, the remainder of the participants were successfully manipulated. However, this brings about additional problems. First, the sample size is considerably smaller than before, leading to a lower power. Second, the remaining sample is not random, the participants were

filtered by looking at which of them were suspicious of the identity manipulation and which were not. One simple factor that could mess with the validity of the results with said sample size is that the remaining participants believed the identity manipulation, because it aligns with their current identity.

As for the interaction effect of measured identity and manipulated identity on the influence of the arguments and cover story, no preregistration was added, however the results show an interesting pattern regarding when participants are manipulated and when they are not.

Future research

As mentioned in the limitations, the main avenue for future research is fixing the identity manipulation. As it stands, no definitive conclusions can be made as for what role identification plays in the three realms model (Spears, 2021), as all prior research is based on moderation effects (Werkman, 2021, Kuis et al., 2022). By improving the manipulation, important conclusions can be drawn regarding the causality of identity on social influence, without any confounding factors interfering.

Furthermore, one could look deeper and more thoroughly into the interaction effect of measured identity and manipulated identity on the influence of the arguments and cover story. While the results from the current paper are interesting, no strong claim can be made, as the sample size is quite small, and the discovery of this effect was by chance, without any prior intentions.

Next, an important factor of future research should be the sample. Current samples have all been taken from first year psychology students (Werkman, 2021; Kuis et al., 2022), and while this is a convenient group to research, external validity remains questioned. On top of this, one could look at different situations, to see if certain factors could be of influence to the outcome, such as importance and urgency to the participants.

Last, longitudinal research could shed a new light on social influence, and how they relate to each other. For example, do arguments (Informational Influence; other/outward focus) influence participants over an extended amount of time, or only temporarily? And which form of influence is stronger over time, RII or Informational influence? Current research has only measured these forms of influence on one specific point, and while this is an important first step, it only paints half a picture.

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Appendix 1

Start of Block: Info + Consent

Q65 • **Why do I receive this information?**
Thank you for participating in our study. The study is part of a Master thesis by Bas Kuis, with Prof. Dr. Russell Spears as supervisor. You have the possibility to take part in this study, as you are a first year psychology student who can participate in SONA studies.

- **Do I have to participate in this research?**

Participation in the research is voluntary. However, your consent is needed. Therefore, please read this information carefully. Ask all the questions you might have, for example because you do not understand something. Only afterwards you decide if you want to participate. If you decide not to participate, you do not need to explain why, and there will be no negative consequences for you. You have this right at all times, including after you have consented to participate in the research.

- **Why this research?**

We ask you to participate in this research, because we are interested in your opinions on a new software package. As a psychology student, you will be working with statistical software regularly, so your opinion will be important in the decision process.

- **What do we ask of you during the research?**

Before you start with the voluntary study, we ask you to read the following information carefully and consent to participating. Might you not want to participate after reading the information, you can just leave the site, there will be no negative consequences. The study consists of a few questionnaires and information about a new statistical software package. First up, we would like to ask you a few questions about your affiliation with your fellow psychology students, and the study psychology itself. Next up, you will be given some information about the new statistical software package along with insights from other psychology students, who already had the possibility to test the software. You have to read this information carefully, and give your opinion about the software. Lastly, you will be asked to fill in another questionnaire about the study psychology, after which you get some final information and are finished. The study will take approximately 20 minutes, and you will be rewarded with 0.5 SONA points after completing it.

Q52 • **What are the consequences of participation?**
Besides the SONA points, there are no real benefits to participating in this study. To our knowledge, there are also no disadvantages or risks when participating.

- **How will we treat your data?**

The data obtained from this experiment will be used for a Master Thesis. After the data is obtained, it will be analysed by me (Bas Kuis) on my personal computer (after anonymising the data). This computer is secured by a password, which ensures that no-one else can access the data. Furthermore, the data will be linked to you through your personal SONA number, and the data will be well secured on my personal computer (through a password). Of course, you have the right to request access, rectification and erasure of your personal data until it is made anonymous, which will be done as soon as everyone obtained their SONA credits, you can request this by sending me an e-mail (B.Kuis@student.rug.nl). If you wish to do so, please let us know by 1-06-2023, after which point your data will be de-identified and it will no longer be possible to trace the responses to you. This means that personal data will be stored until the study is closed, which might take a few weeks. Anonymized data will be stored indefinitely, as it might be reused in further research. People can contact me (Bas Kuis) or Dr. Russell Spears for access to the data.

- **What else do you need to know?**

You may always ask questions about the research: now, during the research, and after the end of the research. You can do so by emailing B.Kuis@student.rug.nl or R.Spears@rug.nl.
Do you have questions/concerns about your rights as a research participant or about the conduct of the research? You may also contact the Ethics Committee of the Faculty of Behavioural and Social Sciences of the University of Groningen: ec-bss@rug.nl. Do you have questions or concerns regarding the handling of your personal data? You may also contact the University of Groningen Data Protection Officer: privacy@rug.nl.

As a research participant, you have the right to a copy of this research information.

Consent “Your view on new stats package”
PSY-2223-S-0063

Now that you have sufficient information to decide if you want to take part in the study, we would like you to give permission below, if desired.

- 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, which 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.

○ Yes, I consent to participate; this consent is valid until 20-06-2023 (2)

○ No, I do not consent to participate (3)

Q72 You can create a copy by making a screenshot (Print screen button on your keyboard), or taking a picture with your phone.

End of Block: Info + Consent

Start of Block: Identity Manipulation Strong

Q74 Before we ask for your opinion about a new statistical software, we would first like you to answer a few questions on how you experience Psychology and being a Psychology student.

Please tick all the boxes that apply to you.

- [ ] I occasionally read psychology books in my leisure time (1)
- [ ] Certain professors are really good at explaining the subjects (2)
- [ ] My parents had influence on my study choice (13)
- [ ] Most courses are different from what I expected (3)
- [ ] Certain lectures are tolerable and sometimes even enjoyable (4)
- [ ] I have followed another study before choosing psychology (12)
- [ ] I dislike most courses (5)
- [ ] I feel like we always have way too much work to do (6)
- [ ] I think some psychology students would be good friends (7)
- [ ] I have family that has studied psychology (11)
- [ ] I enjoy a reasonable amount of the psychology courses (8)
- [ ] I always dread the assignments given to us (9)
- [ ] I have watched psychology videos online (I.e. on Youtube) (10)
- [ ] In my experience, I found psychology students to be generally helpful (14)
- [ ] Quite a few psychology students are competent when working in groups (15)
- [ ] It is pleasant to work together with most psychology students (16)

Page Break

JS

Q77 The computer is now using a formula to calculate your identification with the group 'psychology students' score, please wait a moment.

JS

Q78 According to the calculations of the computer, you identify more strongly with being a psychology student than [73%] of the other participants.

This score is calculated through a formula specifically designed for the previous box-ticking questionnaire. Scoring high on identification means that you ticked more positive boxes and fewer negative boxes, and vice versa with scoring low on identification.

This means that you have a strong identification with your chosen study, Psychology, and with fellow psychology students, at least compared to the average psychology student.

End of Block: Identity Manipulation Strong

Start of Block: Identity Manipulation Weak

Q73 Before we ask for your opinion about a new statistical software, we would first like you to answer a few questions on how you experience Psychology and being a Psychology student.

Please tick all the boxes that apply to you.

- [ ] I read a lot of psychology books in my leisure time (not required reading) (1)
- [ ] All of the professors are really good at explaining the subjects (2)
- [ ] I have had a few courses that were different from what I expected (3)
- [ ] I have family that has studied psychology (11)
- [ ] I have enjoyed every lecture so far (4)
- [ ] I have followed another study before choosing psychology (13)
- [ ] I dislike certain courses (5)
- [ ] I have had periods where it felt like we had too much work to do (6)
- [ ] My parents had influence on my study choice (12)
- [ ] I wouldn't want to become friends with all of the students (7)
- [ ] I have enjoyed all of the courses so far (8)
- [ ] Sometimes I dread the assignments given to us (9)
- [ ] I watch a lot of psychology videos online (I.e. on Youtube) (10)
- [ ] I've found a few psychology students to be unhelpful (14)
- [ ] I have worked together with a few incompetent psychology students (15)
- [ ] I have worked together with some unpleasant psychology students (16)

Page Break

JS

Q75 The computer is now calculating your identification with the group 'psychology students' score, please wait a moment.

JS

Q76 According to the calculations of the computer, you identify more weakly with being a psychology student than [73%] of the other participants.

This score is calculated through a formula specifically designed for the previous box-ticking questionnaire. Scoring high on identification means that you ticked more positive boxes and fewer negative boxes, and vice versa with scoring low on identification.

This means that you have a weak identification with Psychology, and with Psychology students, at least compared to the average psychology student.

End of Block: Identity Manipulation Weak

Start of Block: identity manipulation weak check

manipulation checkID To make sure that you understood the previous information, please indicate to what extent you identify with psychology and psychology students, according to the feedback.

- I identifed lower than average (i.e. weakly) with psychology and psychology students (2)
- I identified with psychology and psychology students to an average degree (1)
- I identified higher than average (i.e.strongly) with psychology and psychology students (3)
- I don't know (4)

End of Block: identity manipulation weak check

Start of Block: Introduction

Q1 Please read this information carefully, because we will be asking you questions about it and you will not be able to go back to previous screens.

An education based software company (SSI; School-Software-Incorporated) has been developing a new statistics software package to compete with programs like SPSS and have been conducting market research in a number of European countries to assess its viability and market potential. A focus group study (Fredericks, 2020) was conducted at the RUG among a small sample of students and staff members, in which a new statistical software called ‘’ProxStat’’ (PS) was evaluated. Specifically, the makers of PS wanted to test how the new software package is valued among its intended users. This market research involved a small sample who were asked to use the new software on a trial basis over a number of weeks, to do their statistical analyses in addition to or instead of their standard software of choice (e.g., SPSS, R) in order to make a direct comparison. The individuals involved closely cooperated with employees of SSI, sometimes also engaging in intensive discussion regarding the goals of PS and the motivations of SSI to develop a new statistical software. In addition, these discussions also provided a constructive space in which potential improvements could be raised. This exchange contributed to the development of the product in order to optimize its utility and usability for its intended users on a range of dimensions. However, this research was quite intensive, costly, small scale, and participants in the trial were also compensated for their time, raising the possibility that they could be biased in their views. With these limitations in mind, the marketing and development department of PS therefore wanted to follow up with a larger and more representative sample to assess the viability and market potential, based on the feedback from the focus groups, before they launch it. They approached colleagues at the social psychology department (i.e. at the same university where they did their focus group research), who commissioned us to conduct such a larger scale study in collaboration with them. Therefore, in the following we ask you to indicate what you think of PS, based on the information arising from the research trial as reported in various excerpts from the focus group study presented next. We realise that this information is necessarily quite limited (compared to the focus group participants experience) but we hope it is sufficient to give you an idea of the package and its potential.

End of Block: Introduction

Start of Block: Group-ID, strong arguments

GIDS The focus group study specifically sampled students and staffmembers from the economics and psychology department, because these are the two primary usergroups of this kind of software. For this particular study we are interested in the opinions of psychology students, for that reason we only show the arguments of

psychology students. Results from the focus group study showed that a small minority of those interviewed after the trial period seemed not to be favourable towards PS, but the vast majority was positive. Actually, all of those opposed were from the economics department, and almost all in favour were from the psychology department. Here are some representative responses from psychology students in the focus group:
- ‘’The new software combine the user-friendliness of SPSS with the power and flexibility of R.’’ (psychology student #12)
- ‘’The software has been extensively pretested and runs smoothly on all platforms (i.e. PC, Mac, desk top, laptop) tested with standard operating systems and memory capacity. I know because I checked for myself on multiple devices!’’ (psychology student #27)
- ‘’ As well as the development of the software itself, the company behind the package has invested considerably in user support to ensure fast responsiveness to any user problems and glitches.’’ (psychology student #6)

End of Block: Group-ID, strong arguments

Start of Block: Group-ID, weak arguments

GIDW The focus group study specifically sampled students and staffmembers from the economics and psychology department, because these are the two primary usergroups of this kind of software. For this particular study we are interested in the opinions of psychology students, for that reason we only show the arguments of psychology students. Results from the focus group study showed that a small minority of those interviewed after the trial period seemed not to be favourable towards PS, but the vast majority was positive. Actually, all of those opposed were from the economics department, and almost all in favour were from the psychology department. Here are some representative responses from psychology students in the focus group:
- ‘’Time tells us that new and innovating software turns out to be the best! New is better!‘’ (psychology student #12)
- ‘’Although it is still in its infancy, the new package deserves a chance -- so why not try it out?’’ (psychology student #27)
- ‘’The developers of this new software have assured us that it has the potential to “take data analysis to the next level".” (psychology student #6)

End of Block: Group-ID, weak arguments

Start of Block: Manipulation check argument strength

MCStrengthArg Overall, how strong do you think the arguments from people in the focus group study are?

- Very weak (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- Very strong (7)

MCCredArg Overall, how credible do you think the arguments are?

- Not at all (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- Very much (7)

End of Block: Manipulation check argument strength

Start of Block: DV's

Q39 Again we realise you may not have had experience with using a stats package yet, but based on the information you have seen we are interested in your views about the new software (ProxStat). Based on the information presented to you,

please tell us what you think about ProxStat by indicating your (dis)agreement with the following statements.

DV1 I am willing to try this new software.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

DV2 I think this software is promising.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

DV3 I think this software is valuable.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

DV4 I would recommend others to try this software package.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

DV5 I would go out of my way to try this new software.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

DV6 I feel persuaded to give this software a chance.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

DV7 I think this new software will ease my experiences with statistics.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

DV8 I am more willing to try ProxStat as I am/was willing to try existing packages like SPSS or R.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

DV9 I think I will benefit from using this new software, in contrast to (keep on) using exisiting software like SPSS or R.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

DV10 If this is good enough for the people who have used it in the research study (focus group), it is good enough for me

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

End of Block: DV's

Start of Block: Focus group Q's

Q62 Now we would like your feedback about the people who already tested the statistical software package. We know the information we provided was limited, but

we would like you to indicate to us a general impression about them on the basis of the next few of questions.

RepPsych How representative of psychology students do you think the individuals who tested the software were?

- ○ Not at all (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ Very much (7)

TypPsych How typical of psychology students do you think the individuals who tested the software were?

- ○ Not at all (1)
- ○ 2 (2)
- ○ 3 (3)
- ○ 4 (4)
- ○ 5 (5)
- ○ 6 (6)
- ○ Very much (7)

Q56 Below is a list of characteristics. Please tick one box to indicate to what degree you think the people who tested the software are like this. Again, indicate your general impression based on the small amount of information you received.

Pleasant Pleasant

- Not at all (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- Very much (7)

Warm Warm

- Not at all (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- Very much (7)

Friendly Friendly

- Not at all (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- Very much (7)

Intelligent Intelligent

- Not at all (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- Very much (7)

Competent Competent

- Not at all (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- Very much (7)

Skillful Skillful

- Not at all (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- Very much (7)

Qualified Qualified to evaluate and analyze statistical software

- Not at all (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- Very much (7)

Trustworthy Trustworthy

- Not at all (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- Very much (7)

Honest Honest

- Not at all (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- Very much (7)

Sincere Sincere

- Not at all (1)
- 2 (2)
- 3 (3)
- 4 (4)
- 5 (5)
- 6 (6)
- Very much (7)

End of Block: Focus group Q's

Start of Block: Level of Group ID specific

Q87 Now, please indicate how you feel about yourself as a psychology student at this moment.

IDspecific1 At this moment I feel good about being a psychology student

- ○ Strongly disagree (26)
- ○ Disagree (27)
- ○ Somewhat disagree (28)
- ○ Neither agree nor disagree (29)
- ○ Somewhat agree (30)
- ○ Agree (31)
- ○ Strongly agree (32)

IDspecific2 At this moment I feel strongly identified with psychology students

- ○ Strongly disagree (13)
- ○ Disagree (14)
- ○ Somewhat disagree (15)
- ○ Neither agree nor disagree (16)
- ○ Somewhat agree (17)
- ○ Agree (18)
- ○ Strongly agree (19)

IDspecific3 At this moment I feel like I have a lot in common with the average psychology student

- ○ Strongly disagree (12)
- ○ Disagree (13)
- ○ Somewhat disagree (14)
- ○ Neither agree nor disagree (15)
- ○ Somewhat agree (16)
- ○ Agree (17)
- ○ Strongly agree (18)

End of Block: Level of Group ID specific

Start of Block: Level of Group ID

Q64 Now, please indicate how you feel about yourself as a psychology student and how you feel about your fellow psychology students in general.

ID1 I feel a bond with psychology students.

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Neither agree nor disagree (4)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

ID2 I feel solidarity with psychology students.

- Strongly disagree (1)
- Disagree (2)
- Somewhat disagree (3)
- Neither agree nor disagree (4)
- Somewhat agree (5)
- Agree (6)
- Strongly agree (7)

ID3 I feel commited to psychology students.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

ID4 I am glad to be a psychology student.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

ID5 I think that psychology students have a lot to be proud of.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

ID6 It is pleasant to be a psychology student.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

ID7 Being a psychology student gives me a good feeling.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

ID8 I often think about the fact that I am a psychology student.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

ID9 The fact that I am a psychology student is an important part of my identity.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

ID10 Being a psychology student is an important part of how I see myself.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

ID11 I have a lot in common with the average psychology student.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

ID12 I am similar to the average psychology student.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

ID13 Psychology students have a lot in common with each other.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

ID14 Psychology students are very similar to each other.

- ○ Strongly disagree (1)
- ○ Disagree (2)
- ○ Somewhat disagree (3)
- ○ Neither agree nor disagree (4)
- ○ Somewhat agree (5)
- ○ Agree (6)
- ○ Strongly agree (7)

End of Block: Level of Group ID

Start of Block: Demographics

Q11 Now, we will ask some general questions regarding your background.

Age What is your age?

_____

Gender What is your gender?

- ○ Male (1)
- ○ Female (2)
- ○ Non-binary / third gender (3)
- ○ Prefer not to say (4)

Nationality What is your nationality?

_____

Group To which group do you belong?

- ○ Economics students (1)
- ○ Economics staffmembers (2)
- ○ Psychology students (3)
- ○ Psychology staffmembers (4)

End of Block: Demographics

Start of Block: Manipulation checks

general mani check1 Do you have any general comments about the study, and what it was about?

_____

_____

_____

_____

_____

Page Break

general mani check2 What did you think of the information on the new statistical software package and the arguments provided by psychology students?

_____

_____

_____

_____

_____

Page Break

general mani check3 What did you think of the computer calculating your identity with psychology and psychology students?

_____

_____

_____

_____

_____

Page Break

mani check cred To what extent did the information on the new statistical software package and the arguments of the psychology students seem credible to you?

- ○ Extremely uncredible (18)
- ○ Somewhat uncredible (19)
- ○ Neither credible nor uncredible (20)
- ○ Somewhat credible (21)
- ○ Extremely credible (22)

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mani check cred To what extent did the computer calculating your identification with psychology students seem credible to you?

- ○ Extremely uncredible (9)
- ○ Somewhat uncredible (10)
- ○ Neither credible nor uncredible (11)
- ○ Somewhat credible (12)
- ○ Extremely credible (13)

Page Break

general mani check4 Are there any aspects of the study that aroused your suspicion?

_____

_____

_____

_____

_____

End of Block: Manipulation checks

Start of Block: Debriefing

Q53 Thank you for participating in our research. We mentioned that we are interested in your opinions about the new statistical software, but this was merely a cover story. What we were really interested in is to what extent group identification influences susceptibility to social influence. In other words, if you identify highly with a certain group to which you belong, we predict that you may be more influenced by that group (and vice versa).

To measure this, the first step was providing false feedback that you either strongly or weakly identify with the group ‘psychology students’. Following this, you were asked to read about the new statistical software and arguments given by fellow psychology students, after which you were asked to indicate your attitudes towards the new software. Half of you were shown weak arguments, the other half were shown strong arguments.

We hypothesize that participants who were manipulated to identify strongly with the psychology students group will be more influenced to be positive towards the new software than the participants who received feedback that they identify weakly with psychology students. As interaction effect, we expect that a strong group identification diminishes the difference between influence of strong and weak arguments, as those people will pay more attention to the source of the arguments, and less to the arguments itself.

It is important to emphasize that there will not be a new statistical software package as far as we know, this was used for the purposes of the experiment. Moreover, it is also important to mention that the group identity manipulation does not reflect your actual affiliation towards your fellow psychology students. So if you were put in the group that identifies weakly, it does not mean that in reality you also identify weakly.

If you have any questions regarding the research, feel free to contact me! You can do this by sending me an email to: B.Kuis@student.rug.nl

End of Block: Debriefing