The Effects of Bounded Self-Disclosure on In-Group Identification: A Vignette Study

Avery Thomson

Norm Brodsky College of Business, Rider University

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Dr. Emre Yetgin

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Abstract

Self-disclosure has been associated with positive group level benefits. Based on a Social Identity Theory of Information-Access Regulation (SITIAR), this study seeks to add to the existing literature on the benefits of self-disclosure in a group context. Self-disclosure is said to be bounded when it has a third party which is withheld from the information. It is theorized that a group will realize greater benefits from a self-disclosure when the bounds of the self-disclosure include the group. Utilizing experimental vignette methodology (EVM), we show that a recipient of self-disclosure realizes a greater degree of individual self-stereotyping when the self-disclosure includes the entire group (N=167). As a result of greater individual self-stereotyping, the recipient's feeling of in-group identification is increased, which will likely lead to greater group functioning.

Keywords: self-disclosure, social identity theory, vignette, covariation, in-group identification, group-level self-investment, group-level self-definition

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Introduction

All people belong to certain groups which unite individuals on some shared characteristic. Some examples of groups may include a shared ethnicity, a shared employer, or a shared hobby. Understanding the relationship between individuals and the groups they populate is a concept which organizational psychologists have been looking at for many decades. Belonging to a group can translate to many facets of life, including both social and organizational contexts, therefore the study of groups is an interesting one for many psychologists.

One of the most pertinent theories in the study of group and intergroup behavior is social identity theory. First posited by Henri Tajfel (1978), social identity was described as "that part of an individual's self-concept which derives from his knowledge of his membership of a social group (or groups) together with the value and emotional significance attached to that membership." (p. 63) Social identity is thus a cognitive process. Social identity theory proposes that individuals cognitively differentiate the people whom they interact with socially into groups through a process known as 'social-categorization'. Described by Taifel, "Social-categorization is a process of bringing together social objects or events in groups which are equivalent with regard to an individual's actions, intentions and system of beliefs." (Tajfel, 1978, p. 61) Social identity theory argues that people make these categorical distinctions automatically and subconsciously. Stemming from social-categorization, Turner (1999) proposed 'self-categorization theory', in which people assign themselves into groups in a process known as self-categorization. Turner along with Tajfel both contributed greatly to the current body of research regarding social identity theory. Alongside self-categorization, social identity theory also posits that individuals will differentiate between groups they belong to, in-groups, and ones which they do not belong to, out-groups. In-groups and out-groups are evaluated against each other based on the individual's assignment of value to each group. All of these effects together contribute to the concept known as social identity. Social identity can be positive or negative, and with that comes relevant benefits or

consequences. A person who finds themselves belonging to a group which they value positively will likely gain self-esteem or other individual benefits. A person who determines themselves as belonging to a negatively evaluated group may reap negative consequences or experience cognitive dissonance and alter their cognitive self-categorization in order to align better with the valuation.

One of the most salient claims associated with social identity theory is that individuals will tend to automatically favor their in-groups. This effect is known as the 'minimal group paradigm'. (Trepte, 2017) Drs. Trepte and Loy of University of Hohenheim Germany illustrate the minimal group paradigm with an example involving yellow and green hats. "A minimal group categorization could consist of wearing either a yellow or green hat. Without any other experiences with in-group or out-group apart from the color of their hats, group members should favor the in-group and allocate more resources to individuals with same-colored hats, according to the minimal group paradigm." (Trepte, 2017, p. 2) In this example, yellow-hatted people favor their yellow-hat colleagues simply because they belong to the same group. This is quite instrumentally the basis of social identity theory.

In-Group Identification

The amount in which a person identifies personally with their group is a concept known as in-group identification. Leach et al posit that in-group identification can be distinguished on two dimensions, Group-level self-definition and group-level self-investment. (Leach, 2008) Leach et al distinguish these two categories based upon prior consensus within sociological research. Group-level self-definition, as theorized by Leach et al, is a measure of similarity between group members. Self-definition is described as "A kinship with fellow group members that is based in similarity and shared circumstances." (Leach, 2008, p. 148) Self-definition represents the factors and circumstances that an individual considers when categorizing themselves within a group. Group-level self-investment, alternatively, is more so representative of a conscious decision and commitment to be a member of a certain group. "Identifying with a group in terms of self-investment should be manifested in individuals' positive feelings about their in-group membership as well as a sense that they have a bond with the

in-group." (Leach, 2008, p. 148) Self-investment is less about the factors which cause categorization and more so about the factors which motivate someone to devote themselves to an in-group.

Group-Level Self-Definition

Leach (2008) distinguishes group-level self-definition on two components, individual self-stereotyping and in-group homogeneity. Group-level self-definition is focused primarily on perceptions of commonalities between an individual and a group as well as the group as a whole. (Leach, 2008)

Individual Self-Stereotyping. The first component of group-level self-definition is individual self-stereotyping. This deals with the cognitive categorization that occurs when an individual places themselves in an in-group. "Identification is indicated when individuals perceive themselves in terms of their group membership." (Leach, 2008, p. 146) This mechanism of perceiving one's self as a part of a group involves comparing facets of one's self with that of other group members. Self-stereotyping comes with the idea that similarities can be identified between an individual and in-group members. "Individuals can self-stereotype by perceiving themselves as similar to the average members of their in-group." (Leach, 2008, p. 146) This self-stereotyping likely leads individuals to become more invested within the triumphs and shortcomings of their in-group, highlighting how self-definition and self-investment are intercorrelated though distinct. "Individual self-stereotyping should lead individuals to see themselves as sharing a common fate with their in-group." (Leach, 2008, p. 146) This 'common fate' likely increases the emotional impact that an in-group's actions have on an individual.

In-Group Homogeneity. The other component of group-level self-definition, in-group homogeneity, is described as "the degree to which individuals perceive their entire group as sharing commonalities." (Leach, 2008, p. 146) Individual self-stereotyping is distinct from in-group homogeneity as the former focuses on an individual's perception of *one's own* similarities to the average group member, while the latter deals with an individual's perception of the *entire group* sharing similarities and forming a cohesive entity.

Group-Level Self-Investment

The second dimension of in-group identification according to Leach (2008) is one's investment to their in-group, known as group-level self-investment. This dimension is split into three components, namely, solidarity, satisfaction and centrality. Group-level self-investment is representative of perceived importance, positive affect and the salience of an individual's group membership. (Leach, 2008)

Solidarity. Defined by Leach (2008) as "based in a psychological bond with, and commitment to, fellow in-group members." (p. 147), solidarity is one component of group-level self-investment. Solidarity is associated with the desire to help the in-group and participate within in-group activities. This desire is what differentiates solidarity from group-level self-definition, as it is not the definition of the self but the investment into the in-group which represents solidarity.

Satisfaction. Being satisfied with an in-group could be represented by happiness or a general good-feeling towards one's in-group. Satisfaction is considered by Leach (2008) to be "the most general way in which individuals may identify with an in-group." (p. 147) Satisfaction is distinct from solidarity in that satisfaction represents affect whereas solidarity represents a desire. Satisfaction is theorized to be "associated with maintaining a positive evaluation of the in-group." (Leach, 2008, p. 147) As such, one who has a negative evaluation of their in-group may experience cognitive dissonance, leading them to reevaluate their self-categorization or reevaluate their negative satisfaction towards the in-group.

Centrality. This component of group-level self-investment is the degree in which one feels as though being a member of their group is a central piece to how they view themselves. "The centrality of a group membership is shown in its chronic salience as well as the subjective importance that individuals give their group membership." (Leach, 2008, p. 147) Oftentimes, centrality is associated closely with responses to threats aimed toward one's group. Centrality likely impacts whether an individual notices threat towards their in-group. Researchers Sellers and Shelton (2003, as cited in Leach, 2008) "showed that African Americans who saw their in-group as central were more likely to perceive the threat of racial discrimination by European Americans." (p. 147) Centrality may be more associated with responses to out-group activities, as opposed to satisfaction which is likely associated with responses to in-group activities.

Self-Disclosure

Many people often share things about themselves to others. Whether it be a personal triumph, a hardship, or just simply an inconsequential detail about one's life, sharing things with others is a common human behavior. This act of sharing is what is known as 'self-disclosure'. Defined simply by Dr. Kerry Gibson in a literature review, "Self-disclosure has been defined as the act of sharing information that is personal and previously unknown by the relational other" (Gibson, 2018, p. 575) In order for the act of sharing to be considered self-disclosure, one must be putting out personally relevant information which they believe the recipient to be unaware of.

Self-disclosure has been associated with many benefits on an individual, interpersonal and group level. As discussed by Gibson (2018), disruptive self-disclosures have the potential to shift relationship trajectories positively when the disclosure increases goal congruence between discloser and recipient. As a result of this positive relationship shift, "relational members experience increased connection." (Gibson, 2018, p. 581) In addition to that, collaboration will be more likely to happen between the two parties associated. (Gibson, 2018) Another result described is that the promotion of thriving and a sense of resilience will be increased in an individual. (Gibson, 2018, p. 581) Self-disclosure is also closely related to liking between individuals. In a meta-analytic review, Drs. Collins and Miller (1994) showed that both ongoing relationships and strangers in a laboratory showed a positive relationship between receiving a disclosure and liking the discloser. The researchers suggest that "observers appear to develop more positive beliefs about others who are willing to disclose personal information about themselves." (Collins, 1994, p. 465) In tandem with these findings, Collins and Miller also showed that people tend to disclose more often to those whom they like. (Collins, 1994) This theoretically creates a loop in which liking someone leads to more frequent disclosure, which leads the recipient to like one more, which causes them to disclose to them more often, causing one to like them more. Researchers Barry Kirshner, Robert Dies and Robert Brown (1978) had shown that in a therapeutic setting self-disclosure was positively associated with group cohesiveness. This factor of group cohesiveness was important to the researchers, as there is great evidence that "group cohesiveness is an important determinant of positive therapeutic

change and produces many results that are considered to mediate successful therapy outcome." (Kirshner, 1978, p. 1171) In a literature review on online self-disclosure, Desjarlais et al. (2015) found positive relationships between "closeness to friends, online friendship formation, sharing positive statements about one's partner, greater perceived support, trust, understanding and commitment across a variety of cultures." (p. 722) In addition, online self-disclosure was also related to 'increases for offline self-disclosure.' (Desjarlais, 2015, p.722) In a review on sharing of emotions, Rime et al. (2020) showed that sharing emotions resulted in "increased norm clarification and enhanced social cohesion." (p. 131)

Self-disclosure has also been associated with neuropsychological effects. In a study conducted by Dr. Thorson (2021) of Barnard College of Columbia University, self-disclosure was shown to 'facilitate adrenocortical attunement between new acquaintances.' Adrenocortical attunement is a neurological process which "has been well documented between romantic relationship partners, between parents and children, and between close friends." (Thorson, 2021, p. 1) Although much of the research on adrenocortical attunement is focused on long-standing close relationships, Thorson et. al. had shown that self-disclosure can cause this process to happen during the meeting of two complete strangers.

Variables exist that may alter the effects of a self-disclosure; thus, it is important to understand the context of a self-disclosure event in order to study the effects of it. One variable is the content of self-disclosures, which can vary greatly. According to Dr. Gibson, "discovering a colleague's preference for a particular software program is likely to produce different effects than discovering that a colleague is considering resigning." (2018, p. 575) Self-disclosures that are deemed inappropriate may lose benefits as a result of a violation of perceived social norms. (Collins, 1994) In addition, disclosure which is perceived as very intimate may result in the recipient feeling pressured to disclose something equally intimate, even if they do not wish to. (Collins, 1994) In a study measuring the effects of self-disclosure with varying content, Hill et al. (2021) found that "disclosing physical illnesses (breast cancer and brain tumor) had the highest approval ratings, followed by owning a pet (control) and finally, mental illnesses (opioid addiction and bipolar disorder)." (p. 218) This research suggests that disclosing information which is potentially stigmatized may result in negative relational trajectories. Research done by Johnson et al.

(2020) on stigmatized self-disclosure in the workplace had highlighted the role of the disclosure recipient in creating positive or negative outcomes. The authors state that "Responses to disclosure are therefore immensely consequential for work relationships, engagement, and employee attitudes and behaviors that contribute to overall organizational performance. Individuals who are at the front lines of disclosure often have the power -informal and/or formal – to support or denigrate individuals belonging to stigmatized groups." (Johnson, 2020, p. 214) This suggests that when recipients of self-disclosure react positively to stigmatized self-disclosure, benefits are realized by an organization as a whole.

All of the parties involved in a self-disclosure event affect the outcomes, for example, the result of two identical content self-disclosure events may vary based on who the discloser is. (Gibson 2018) One large factor identified by Gibson is whether or not the self-disclosure event is 'disruptive'. "Disruptive self-disclosure occurs when a discloser reveals previously unknown, self-relevant information that challenges current expectations within the given relationship." (Gibson, 2018, p. 575) Disruptive self-disclosure often results in a reassessment of the relationship between discloser and recipient rather than just an increase in the recipient's knowledge of the discloser. A disruptive self-disclosure will likely result in a change in how these two parties interact with one another, and should be regarded carefully. Gibson (2018) posits that one must take into account whether the disruptive self-disclosure increases goal congruence or incongruence between the two parties in order to assess whether a self-disclosure may be beneficial.

The degree to which a self-disclosure event is bounded may alter the benefits realized. Authored by Bingley et al. (2021), a conceptual framework known as "Social Identity Theory of Information-Access Regulation (SITIAR)" defines bounded disclosure as "when there is a third party or parties from whom the information is to be withheld." (p. 3) For instance, a private self-disclosure between two individuals would be fully bounded, whereas a self-disclosure on Facebook would be much less bounded, as anyone with access to the Facebook page could be a recipient of the self-disclosure. SITIAR suggests that fully bounded disclosure will result in stronger effects on in-group identification than partially bounded or unbounded disclosure. Hypothesis 3a of SITIAR suggests that bounded self-disclosure "that

encompasses a group will improve group functioning by increasing shared social identity among group members." (Bingley, 2021, p. 4) In hypothesis 3b, Bingley (2021) also states that partially bounded self-disclosure which "intersects or cuts across a group will worsen group functioning by reducing shared social identity among group members." (p. 4) Shared social identity is very much related to in-group identification, and it may be closely analogous to individual self-stereotyping. "Self-categorization entails a process of self-stereotyping. People who self-categorize as members of the same group therefore have a *shared social identity* with others in the group." (Bingley, 2021, p. 2) Taking into account these assumptions, it can be said that a fully bounded self-disclosure that cuts across a group may lower the recipient's in-group identification, but it may also increase the individual self-stereotyping between the discloser and recipient. SITIAR serve as the theoretical framework on which this study is based upon and seeking to validate. Therefore, the following hypotheses are proposed:

Hypothesis: A partially bounded self-disclosure event encompassing an entire group will increase in-group identification compared to a fully bounded self-disclosure event encompassing only 2 individuals in the group.

Methodology

A between-subjects experimental vignette methodology (EVM) design with two levels was chosen for this study. A 2–5-minute survey hosted the vignettes as well as some measurement scales. A scale compiled by Leach (2008) was used in order to capture in-group identification. A vignette was chosen in order to illustrate a self-disclosure event. Two separate vignettes were designed, one with a fully bounded disclosure and another with a partially bounded disclosure. Within the vignettes, a virtual work team is introduced and one of the members self-discloses that they had been suffering from COVID-19 until recently. This scenario was chosen for the self-disclosure event due to the prominence of COVID-19 as of recent. Furthermore, COVID-19 represents a condition which is unlikely to carry any stigma and is somewhat unexplored. In addition, virtual work teams have become extremely prevalent over the last few years, becoming the norm during the COVID-19 pandemic, thus many people may be equally or more

familiar with a virtual work team scenario than an in-person work team scenario as of the administering of this study.

In order to capture in-group identification, 9 items from Leach's (2008) multicomponent in-group identification scale were used. Although the scale includes 5 separate components, one was removed, namely, centrality. Centrality was decided to be irrelevant to the vignette, as it was deemed unlikely that an experimentally created work team would have any salience to an individual. Additionally, many participants in the sample were unlikely to have full-time work experience, as such centrality was one measure which was unlikely to be contextually appropriate for the sample. Thus, solidarity, satisfaction, individual self-stereotyping and in-group homogeneity were all utilized for this study. Two items measuring satisfaction were removed, namely, "I think that [In-group] have a lot to be proud of." (Ellemers, Kortekaas, & Ouwerkerk, 1999, as cited by Leach, 2008, p. 165) and "It is pleasant to be [In-group]." (Doosje et al., 1998, as cited by Leach, 2008, p. 165) The first item was removed as the vignette involves a newly introduced work team which had not accomplished anything yet, thus there was likely nothing to be proud of. The second item was removed as it seemed highly similar to the remaining satisfaction measures. The remaining 9 items were measured with a 7-point Likert scale ranging from "Strongly Disagree" to "Strongly Agree" and were administered after the vignette. In addition to these 9 items, two attention checks were included in the final design, namely, "Please select "Disagree" and "Which one of your teammates sent the email you just read?"

When designing the survey, some covariates were determined which may influence the effect of the independent variable. Empathy measures, a measure of familiarity with COVID-19 and demographic variables were included as potential covariates. The empathy measures and COVID-19 familiarity measure were recorded using a 7-point Likert scale. The demographic variables were recorded either with radio buttons or a 7-point Likert scale. All questions used in the final survey are included in Appendix B.

The vignettes were designed following best practice recommendations laid out by Aguinis and Bradley (2014) which consist of 10 decision points. The first decision point is deciding if an EVM is

suitable for this research. It was decided that in order to capture self-disclosure in a timely fashion, an EVM was the most appropriate approach. In addition, since the scenario represents a virtual work team, the vignette is likely to produce a similar context as if it were a real virtual work team since both involve computer mediated communication. The second decision point was to determine which type of EVM to choose, a 'paper people' or 'policy capturing and conjoint analysis'. (Aguinis, 2014) The main difference between the two is that paper people studies focus on explicit responses to vignettes whereas policy capturing and conjoint analysis studies focus on implicit processes. Since the measures of in-group identification were all based on explicit answers to a Likert scale, the paper people study approach was chosen. The third decision point was to decide whether a between-subject, within-subject or mixed design should be chosen. Since self-disclosure has been shown to have an additive affect in terms of liking, (Collins, 1994) a between-subject design was chosen in order to ensure that the answers recorded were as a result of one self-disclosure. This presents a limitation in that comparisons cannot be made across respondents.

The next decision point was regarding immersion. Pierce & Aguinis (1997) state that "more immersive techniques enhance experimental realism" (as cited by Aguinis, 2014) Immersion can be increased through the usage of methods other than just text. To increase immersion, the vignettes were displayed in the form of a screenshot of the Gmail website. This increases immersion as real virtual teams are likely to be communicating via email and most people have some experience using an email client. The fifth decision point was to "specify the number and levels of the manipulated factors." (Aguinis, 2014) The only manipulated factor was the bounds of the disclosure, and it was decided that two levels were sufficient. Three levels were at-first considered, namely, bounded, partially bounded and unbounded, however, it was unclear as to how fully unbounded disclosure could be manipulated. In addition, having only 2 levels meant that a smaller sample size would be required in order to gain a statistically significant result. The sixth decision point was to decide how many vignettes would be developed in total. Since there was only one independent variable with two levels, only two vignettes were necessary.

The seventh decision point was to specify the sample. Much of the sample was to be collected with convenience sampling, thus, the sample was determined to be most representative of college-aged or older individuals living in the northeast United States, as the research was conducted at Rider University in New Jersey. In order to expand the sample as well as ensure a more diverse and representative sample, a service called Prolific was utilized to gain 100 additional respondents. Demographics comparing both samples are shown below.

Prolific

Are you married?

	Ν	%
Yes	28	28.0%
No	72	72.0%

Convenience

Are you married?

	Ν	%
Yes	8	11.9%
No	59	88.1%

Prolific

What is the highest level of education that you have completed?

	N	%
Some High School	2	2.0%
High School Diploma	8	8.0%
Some College	14	14.0%
Associates Degree	4	4.0%
Bachelor's Degree	57	57.0%
Master's Degree	13	13.0%
Ph.D. or higher	2	2.0%

Convenience

What is the highest level of education that you have completed?

	Ν	%
High School Diploma	10	14.9%
Some College	26	38.8%
Associates Degree	9	13.4%
Bachelor's Degree	12	17.9%
Master's Degree	9	13.4%
Trade School	1	1.5%

Prolific					
What is your age?					
	N	%			
18-27	37	37.0%			
28-37	31	31.0%			
38-47	16	16.0%			
48-57	12	12.0%			
58-67	4	4.0%			

Convenience

What is your age?

	Ν	%
18-27	55	82.1%
28-37	7	10.4%
38-47	3	4.5%
48-57	2	3.0%

Prolific

Which best describes your ethnicity?

	N	%
Caucasian	76	76.0%
African-American	3	3.0%
Latino or Hispanic	4	4.0%
Asian	13	13.0%
Two or More	2	2.0%
Other/Unknown	2	2.0%

Convenience

Which best describes your ethnicity?

	N	%
Caucasian	48	71.6%
African-American	8	11.9%
Latino or Hispanic	5	7.5%
Asian	4	6.0%
Two or More	2	3.0%

affiliation? Ν % Very Liberal 22 22.0% Liberal 37 37.0% Slightly Liberal 14 14.0% Neither Liberal nor 14 14.0% Conservative Slightly Conservative 5 5.0% 6 Conservative 6.0% Very Conservative 2 2.0%

Prolific

Which best describes your political

Convenience

Which best describes your political affiliation?

	Ν	%
Very Liberal	6	9.0%
Liberal	16	23.9%
Slightly Liberal	16	23.9%
Neither Liberal nor Conservative	21	31.3%
Slightly Conservative	4	6.0%
Conservative	3	4.5%
Very Conservative	1	1.5%

The age demographic was highly skewed towards "18-27" and the education demographic was skewed towards "Some College" in the convenience sample due to the fact that most of the respondents were college students. By including the Prolific sample, a more representative sample was analyzed. The participants from Prolific were limited to those within the Northeast United States, similarly to those collected through convenience sampling. Participants from Prolific received \$1 compensation for approximately 2-5 minutes of their time. Participants otherwise did not receive compensation. The sample size was projected for at least 150, as this would give approximately 75 participants in each experimental group. This sample size was chosen as it was more than sufficient to have enough power for the chosen statistical test, even if assumptions of the test are violated. The final sample size was 167, with 81 participants in the partially bounded group and 86 participants in the fully bounded group.

		Value Label	N
Random Stimulus Assignment	1	Partially Bounded	81
	2	Fully Bounded	86

The eighth decision point was to specify a time and setting. The survey was designed and administered on Psychdata.org, a robust website with powerful survey building tools. Since the survey was administered asynchronously online, participants could respond at any time. Data was collected between March 24th, 2022 and April 4th, 2022. The ninth decision point was to decide on a statistical method to analyze the data. Since multiple dependent variables were being measured and some covariates were determined, a Multivariate Analysis of Covariance (MANCOVA) was chosen. In addition, the sample was likely to violate some assumptions associated with the MANCOVA, however, a MANCOVA is generally very robust in regards to violating these assumptions, especially with a large sample size. The final decision point laid out by Aguinis and Bradley (2014) was the level of transparency regarding reporting. In an effort to be as transparent as possible, all scales utilized are in Appendix B.

The vignettes involved the participant being introduced to a project team consisting of three others which they have recently been assigned to. Unisex names of the project team were all chosen in order to mitigate any potential risks associated with gender. After the initial context of the vignette, two possible randomly selected stimuli were presented to the participant, one which represented fully bounded self-disclosure and another that represented partially bounded self-disclosure. Within the fully bounded self-disclosure vignette, a screenshot is presented in which a member of the team sends an email to only the participant in which they self-disclose about their recent struggle with COVID-19. In the partially bounded self-disclosure vignette, everything is identical except that the recipients of the email now include the other 2 members of the team, as well as the greeting being changed from "Hello" to "Hello team". Both vignettes are included in Appendix A.

Results

After running an analysis including all of the possible covariates, a step-wise method was used to determine which covariates to use. Of the 11 covariates identified, four were chosen. Three of the included covariates were empathy measures utilizing a 7-point Likert scale, namely, "It is easy for me to understand what Charlie is experiencing', "It distresses me when others suffer", and "I get a strong urge to

help others who are distressed.". The fourth covariate was respondent age. Other variables which were recorded were excluded from analysis due to large p-values.

A MANCOVA was utilized to compare receiving a fully bounded self-disclosure vignette and a partially bounded self-disclosure vignette. (n=167) The mean score for each measure of in-group identification with standard deviations between vignette groups are presented in the below chart.

	Random Stimulus Assignment	Mean	Std. Deviation	Ν
I feel a bond with my	Partially Bounded	4.09	1.451	81
team.	Fully Bounded	4.33	1.241	86
	Total	4.21	1.348	16
I feel solidarity with my	Partially Bounded	4.53	1.215	81
team.	Fully Bounded	4.36	1.255	8
	Total	4.44	1.235	16
I feel committed to my	Partially Bounded	5.04	.968	8
team.	Fully Bounded	4.95	1.016	8
	Total	4.99	.991	16
I am glad to be a part of	Partially Bounded	5.04	.968	8
my team.	Fully Bounded	4.86	1.129	8
	Total	4.95	1.054	16
Being part of this team	Partially Bounded	4.54	1.215	8
gives me a good feeling.	Fully Bounded	4.58	1.222	8
	Total	4.56	1.215	16
I have a lot in common	Partially Bounded	4.21	1.069	8
with the average member of my team.	Fully Bounded	4.03	1.045	8
or my team.	Total	4.12	1.057	16
I am similar to the	Partially Bounded	4.48	1.026	8
average member of my team.	Fully Bounded	4.19	1.023	8
icani.	Total	4.33	1.032	16
My team members have a	Partially Bounded	4.27	.949	8
lot in common with each other.	Fully Bounded	4.12	.832	8
ouror.	Total	4.19	.891	16
My team members are	Partially Bounded	4.16	.941	8
very similar to each other.	Fully Bounded	4.10	.882	8
	Total	4.13	.909	16

Simple Descriptive Statistics

The one-way between-groups multivariate analysis when controlling for covariates of "It is easy for me to understand what Charlie is experiencing.", "It distresses me when others suffer.", "I get a strong urge to help others who are distressed." and respondent age, revealed a significant overall effect for the bounds of self-disclosure, Pillai's Trace = 0.11, F = 2.004, df = (9, 153), p = .042. After conducting individual one-way between-groups ANOVAs, it was determined that there was a difference between vignette groups for the in-group identification measure of "I am similar to the average member of my

team" F = 3.95, df = (1, 161), p = .049, η 2 = .02. Thus, group-level self-definition is significantly different between vignette groups through individual self-stereotyping.

The F tests for both groups on the remaining in-group identification measures were not significant, results are shown in Chart C2. Thus, solidarity, satisfaction and in-group homogeneity were not significantly different between vignette groups.

Effect		Value	F	Hypothesis df	Error df	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ^c
Intercept	Pillai's Trace	.340	8.759 ^b	9.000	153.000	<.001	.340	78.832	1.000
	Wilks' Lambda	.660	8.759 ^b	9.000	153.000	<.001	.340	78.832	1.000
	Hotelling's Trace	.515	8.759 ^b	9.000	153.000	<.001	.340	78.832	1.000
	Roy's Largest Root	.515	8.759 ^b	9.000	153.000	<.001	.340	78.832	1.000
ltiseasyformetounderstan	Pillai's Trace	.106	2.020 ^b	9.000	153.000	.041	.106	18.180	.844
dwhatCharlieisexperienci ng	Wilks' Lambda	.894	2.020 ^b	9.000	153.000	.041	.106	18.180	.844
-	Hotelling's Trace	.119	2.020 ^b	9.000	153.000	.041	.106	18.180	.844
	Roy's Largest Root	.119	2.020 ^b	9.000	153.000	.041	.106	18.180	.844
Itdistressesmewhenother	Pillai's Trace	.125	2.436 ^b	9.000	153.000	.013	.125	21.928	.915
ssuffer	Wilks' Lambda	.875	2.436 ^b	9.000	153.000	.013	.125	21.928	.915
	Hotelling's Trace	.143	2.436 ^b	9.000	153.000	.013	.125	21.928	.915
	Roy's Largest Root	.143	2.436 ^b	9.000	153.000	.013	.125	21.928	.915
Igetastrongurgetohelpoth	Pillai's Trace	.145	2.891 ^b	9.000	153.000	.003	.145	26.018	.959
erswhoaredistressed	Wilks' Lambda	.855	2.891 ^b	9.000	153.000	.003	.145	26.018	.959
	Hotelling's Trace	.170	2.891 ^b	9.000	153.000	.003	.145	26.018	.959
	Roy's Largest Root	.170	2.891 ^b	9.000	153.000	.003	.145	26.018	.959
Whatisyourage	Pillai's Trace	.078	1.447 ^b	9.000	153.000	.173	.078	13.022	.676
	Wilks' Lambda	.922	1.447 ^b	9.000	153.000	.173	.078	13.022	.676
	Hotelling's Trace	.085	1.447 ^b	9.000	153.000	.173	.078	13.022	.676
	Roy's Largest Root	.085	1.447 ^b	9.000	153.000	.173	.078	13.022	.676
RandomStimulusAssign	Pillai's Trace	.105	2.004 ^b	9.000	153.000	.042	.105	18.034	.841
ment	Wilks' Lambda	.895	2.004 ^b	9.000	153.000	.042	.105	18.034	.841
	Hotelling's Trace	.118	2.004 ^b	9.000	153.000	.042	.105	18.034	.841
	Roy's Largest Root	.118	2.004 ^b	9.000	153.000	.042	.105	18.034	.841

Multivariate Analysis

a. Design: Intercept + ItiseasyformetounderstandwhatCharlieisexperiencing + Itdistressesmewhenotherssuffer + Igetastrongurgetohelpotherswhoaredistressed + Whatisyourage + RandomStimulusAssignment

b. Exact statistic

c. Computed using alpha = .05

Three covariates were shown to have significant overall effects on the dependent variables. The first covariate, "It is easy for me to understand what Charlie is experiencing" Pillai's Trace = 0.11, F = 2.02, df = (9, 153), p = .041, differed on 4 dependent measures, "I feel a bond with my team." F = 7.51, df = (1, 161), p = .007, $\eta = 2 = .225$, "I feel committed to my team." F = 5.6, df = (1, 161), p = .019, $\eta = .034$,

"I am glad to be a part of my team." F = 5.67, df = (1, 161), p = .018, $\eta = .034$, and "I have a lot in common with the average member of my team." F = 5.688, df = (1, 161), p = .018, $\eta = .034$.

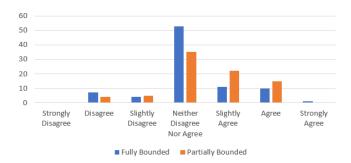
The second covariate, "It distresses me when others suffer" Pillai's Trace = 0.13, F = 2.44, df = (9, 153), p = .013, differed on 6 dependent measures, "I feel a bond with my team." F = 4.71, df = (1, 161), p = .031, $\eta = 2 = .028$, "I feel committed to my team." F = 10.16, df = (1, 161), p = .002, $\eta = .026$, "Being part of this team gives me a good feeling." F = 4.31, df = (1, 161), p = .04, $\eta = .026$, "I am similar to the average member of my team." F = 4.24, df = (1, 161), p = .041, $\eta = .026$, "My team members have a lot in common with each other." F = 10.6, df = (1, 161), p = .001, $\eta = .062$, and "My team members are very similar to each other." F = 5.99, df = (1, 161), p = .016, $\eta = .062$.

The third covariate, "I get a strong urge to help others who are distressed." Pillai's Trace = 0.145, F = 2.89, df = (9, 153), p = .003, differed on 3 dependent measures, "I am similar to the average member of my team." F = 5.55, df = (1, 161), p = .02, $\eta = 2 = .033$, "My team members have a lot in common with each other." F = 7.04, df = (1, 161), p = .009, $\eta = 2 = .042$, and "My team members are very similar to each other." F = 6.364, df = (1, 161), p = .013, $\eta = .038$.

Discussion

The results of the MANCOVA show that there is a significant difference between partially bounded and fully bounded self-disclosure for the individual self-stereotyping measure of "I am similar to the average member of my team." This finding directly supports hypothesis 1, as the bounded disclosure encompassing the entire group increased a measure of in-group identification. Chart C4 shows the difference in means between the two experimental groups. The effect seems to imply that a bounded self-disclosure that intersects a group will result in a mostly neutral in-group identification with the group, however, when the same self-disclosure event includes the entire group, the in-group identification is significantly more positive.

Distribution of "I am similar to the Average member of my team." between Vignette Groups



The above chart illustrates the distribution of responses across the two vignette groups for "I am similar to the average member of my team.". Looking at this chart, it is simple to see that the fully bounded self-disclosure has a much higher distribution of neutral responses, whereas the partially bounded self-disclosure (which includes the entire team) has a greater frequency of positive responses. This is consistent with the framework laid out in SITIAR (2021), as group level benefits are being measured therefore the group suffers when the bounds of disclosure become too narrow.

Interestingly, only one of the nine dependent measures was statistically significant between vignette groups. This may be due to the relatively weak effect size, as the recorded effect only changed the mean difference of .32. Although the MANCOVA did not produce significant results for any of the other dependent measures, when looking at the descriptive statistics of the sample an expected pattern emerges. Seven out of nine of the dependent measures had a higher mean value in the partially bounded group than in the fully bounded group, suggesting that perhaps further analysis should be sought in order to fully confirm whether these variables are related to the self-disclosure event.

Although this was not the purpose of this study, it seems that the measures for empathy produced many significant differences. These measures are "It is easy for me to understand what Charlie is experiencing.", "It distresses me when others suffer." and "I get a strong urge to help others who are distressed." This implies that those with higher empathy are likely to have stronger feelings of in-group identification than those with lower empathy scores.

Limitations and Future Directions

Being that this study is a between-subjects design, it is impossible to make comparisons across respondents, thus I cannot rule out the possibility that differences in the sample resulted in the effect. Future researchers would benefit from implementing a within-subjects design, thus being able to better analyze whether the effect was due to the vignettes or some other confounding variable.

In addition, the method of attaining the sample was not ideal. Some of the participants were gathered with a convenience method, and thus no control was guaranteed in regards to the sample. Being limited to people within my social network may have skewed the results. Many of the sample were college-aged young adults, who may not have as much experience working alongside others as someone older may have. In addition, 100 of the participants were paid \$1 while 67 of the participants were not compensated. This difference in compensation may have resulted in a difference of motivation while taking the survey. Future researchers should strive to gain a better sampling method when conducting a survey similar to this one.

Another limitation of this study may be that the difference between the two experimental groups was not defined enough. Although there was a difference in the two vignettes, the difference may have been inconsequential. For future studies, a partially bounded and fully bounded vignette may gain by having a stronger and more identifiable difference between each other. In addition, people who are unfamiliar with the interface of an email client may not have fully grasped whether or not the whole group was included. The findings of this study are also only applicable to virtual team settings. In addition, there was no inclusion of a visual representation of any of the team members, thus reducing them only to text. Perhaps by including a picture of the teammate the effects will be stronger. Real groups may display different results to self-disclosure, and thus future researchers who seek to replicate these findings should strive to increase generalizability of self-disclosure benefits on in-group identification.

This study is also limited in that it only recorded the group-level dependent variables. Although there was a significant effect showing that partially bounded disclosure results in greater in-group identification, there was no measure as to the shared identity between the dyad of discloser and participant. Perhaps it would show that in addition to group-level effects, the interpersonal benefits

between discloser and recipient are also significant. Future studies would do well to include an additional measure of interpersonal benefits in order to fully understand the mechanisms acting within self-disclosures.

Future studies could seek to identify a link between empathy and in-group identification. This study identified a relationship between empathy measures and in-group identification; however, a more robust measure of empathy could be used in order to capture a full picture of empathy. Future researchers could seek to identify a directionality on the relationship between empathy and in-group identification as well.

A future direction could be to study this effect in locations other than the northeast United States. The current study was limited to the northeast United States. By including other regions of the United States or other countries a more robust and generalizable conclusion on the effect can be gathered. Future researchers could seek to identify if this effect is replicable in countries that are less developed than the United States. It would be interesting to know if this effect is found within tribal communities or in places which are more collectivistic than the United States.

Conclusion

The current study shows that partially bounded self-disclosure has greater group level benefits when the disclosure includes the entire group rather than just a subset of it. Looked at from another angle, this study suggests that purposely withholding information from a group one belongs to will decrease group-functioning. This study documents a single group-level interaction between the bounds of self-disclosure and in-group identification, offering greater clarity onto the effects of self-disclosure as well as supporting the use of self-disclosure to increase group functioning.

References

- Aguinis, H., & Bradley, K. J. (2014). Best practice recommendations for designing and implementing experimental vignette methodology studies. *Organizational research methods*, *17*(4), 351-371.
- Bingley, W. J., Greenaway, K. H., & Haslam, S. A. (2021). A Social-Identity Theory of Information-Access Regulation (SITIAR): Understanding the Psychology of Sharing and Withholding. *Perspectives on Psychological Science*, 1745691621997144.

- Collins, N. L., & Miller, L. C. (1994). Self-disclosure and liking: a meta-analytic review. *Psychological bulletin*, *116*(3), 457.
- Desjarlais, M., Gilmour, J., Sinclair, J., Howell, K. B., & West, A. (2015). Predictors and social consequences of online interactive self-disclosure: A literature review from 2002 to 2014. *Cyberpsychology, Behavior, and Social Networking*, *18*(12), 718-725.
- Gibson, K. R. (2018). Can I tell you something? How disruptive self-disclosure changes who "we" are. *Academy of Management Review*, *43*(4), 570-589.
- Hill, K. G., Martischewsky, M. J., & Erickson, C. A. (2021). Information Type Influences Students' Perceptions of Faculty Self-Disclosures. *Teaching of Psychology*, *48*(3), 215-220.
- Johnson, T. D., Joshi, A., & Hogan, T. (2020). On the front lines of disclosure: A conceptual framework of disclosure events. *Organizational Psychology Review*, *10*(3-4), 201-222.
- Kirshner, B. J., Dies, R. R., & Brown, R. A. (1978). Effects of experimental manipulation of self-disclosure on group cohesiveness. *Journal of Consulting and Clinical Psychology*, *46*(6), 1171.
- Leach, C. W., Van Zomeren, M., Zebel, S., Vliek, M. L., Pennekamp, S. F., Doosje, B., ... & Spears, R.
 (2008). Group-level self-definition and self-investment: a hierarchical (multicomponent) model of in-group identification. *Journal of personality and social psychology*, 95(1), 144-165.
- Rimé, B., Bouchat, P., Paquot, L., & Giglio, L. (2020). Intrapersonal, interpersonal, and social outcomes of the social sharing of emotion. *Current opinion in psychology*, *31*, 127-134.
- Tajfel, H. (1978). Differentiation between social groups. Studies in the social psychology of intergroup relations. London, UK: Academic Press.
- Thorson, K. R., Ketay, S., Roy, A. R., & Welker, K. M. (2021). Self-disclosure is associated with adrenocortical attunement between new acquaintances. *Psychoneuroendocrinology*, *132*, 105323.

Trepte, S., & Loy, L. S. (2017). Social identity theory and self-categorization theory. *The international encyclopedia of media effects*, 1-13.

Turner, J.C. (1999). Some current issues in research on social identity and self-categorization theories.

Appendix A. Vignettes

Figure A1 – Bounded Disclosure

Hello from Charlie. Inbox ×		0					
Charlie <charlie123@gmail.com> (1 min to me ▼</charlie123@gmail.com>	ute ago) 🛛 🛣	¢	:				
Hello,							
I am looking forward to working on this project with you. Over the last month I had been dealing with a positive COVID-19 diagnosis, which has been a struggle. As of yesterday, I have tested negative for COVID-19! Having been sick for that period, I am glad to be working on this project.							
Charlie							
← Reply → Forward							

Figure A2 – Partially Bounded Disclosure

	Hello from Charlie. Inbox ×			0	Ø
-	Charlie <charlie123@gmail.com> to me, Skylar, Kai ╺</charlie123@gmail.com>	(1 minute ago)	☆	¢	:
	Hello team,				
	I am looking forward to working on this project dealing with a positive COVID-19 diagnosis, whi have tested negative for COVID-19! Having been working on this project.	ch has been a struggle.	As of y	esterda	

Charlie



Appendix B. Scales

Attention Check

Figure B1 – Attention check

Which one of your teammates sent the email you just read?

O Charlie

O Skylar

🔾 Kai

In-Group Identification

Group-Level Self-Investment

Solidarity.

I feel a bond with my team.

I feel solidarity with my team.

I feel committed to my team.

Please select "Disagree" (Attention check)

Satisfaction.

I am glad to be a part of my team.

Being part of this team gives me a good feeling.

Group-Level Self-Definition

Individual Self-Stereotyping.

I have a lot in common with the average member of my team.

I am similar to the average member of my team.

In-Group Homogeneity.

Team members have a lot in common with each other.

Team members are very similar to each other.

Empathy

It is easy for me to understand what Charlie is experiencing.

It distresses me when others suffer.

I find it difficult to "put myself in other's shoes".

I get a strong urge to help others who are distressed.

COVID-19 Familiarity

I am knowledgeable about COVID-19.

Demographics

Figure B2 – Ethnicity

- Which best describes your ethnicity?
- 🔾 Caucasian
- O African-American
- 🔾 Latino or Hispanic
- 🔿 Asian
- Native American
- O Native Hawaiian or Pacific Islander
- O Two or More
- Other/Unknown
- O Prefer Not to Say

Figure B3 – Gender

What is your gender

- O Male
- O Female
- O Non-Binary
- O Prefer Not to Say

Figure B4 – Age

What is your age?

- O Under 18
- 0 18-27
- 0 28-37
- 0 38-47
- 0 48-57
- 0 58-67
- 068+
- O Prefer Not to Say

Figure B5 – Political Affiliation

Which best describes your political affiliation?

Very Liberal

Liberal

- O Slightly Liberal
- Neither Liberal nor Conservative
- O Slightly Conservative
- O Conservative
- O Very Conservative

Figure B6 – Education

What is the highest level of education that you have completed?

O Some High School

High School Diploma

O Some College

- Associate's Degree
- O Bachelor's Degree
- O Master's' Degree
- O Ph.D. or higher
- Trade School
- O Prefer Not to Say

Figure B7 – Marital Status

Are you married?

O Yes

⊖ No

O Prefer Not to Say

Appendix C. Results

Chart C1 – Tests of Between-Subjects Effects

Source	Dependent Variable	Type III Sum of Squares	df	Mean Square	F	Sig.	Partial Eta Squared	Noncent. Parameter	Observed Power ⁱ
Corrected Model	I feel a bond with my team.	36.784ª	5	7.357	4.472	<.001	.122	22.358	.967
	I feel solidarity with my team.	14.408 ^b	5	2.882	1.943	.090	.057	Parameter 22.358 9.714 17.898 12.164 12.109 13.595 13.020 13.020 17.999 9.984 1.220 11.151 33.084 23.110 9.834	.645
	I feel committed to my team.	16.307°	5	3.261	3.580	.004	.100	17.898	.915
	I am glad to be a part of my team.	12.961 ^d	5	2.592	2.433	.037	.070	12.164	.759
	Being part of this team gives me a good feeling.	17.144 ^e	5	3.429	2.422	.038	.070	12.109	.756
	I have a lot in common with the average member of my team.	14.453 ^r	5	2.891	2.719	.022	.078	13.595	.811
	I am similar to the average member of my team.	13.234 ^g	5	2.647	2.604	.027	.075	13.020	.791
	My team members have a lot in common with each other.	13.260 ^h	5	2.652	3.600	.004	.101	17.999	.917
	My team members are very similar to each other.	8.006 ⁱ	5	1.601	1.997	.082	.058	9.984	.659
Intercept	I feel a bond with my team.	2.007	1	2.007	1.220	.271	.008	1.220	.195
	I feel solidarity with my team.	16.540	1	16.540	11.151	.001	.065	11.151	.913
	I feel committed to my team.	30.143	1	30.143	33.084	<.001	.170	9.714 17.898 12.164 12.109 13.595 13.020 17.999 9.984 1.220 11.151 33.084 23.110 9.834 20.478	1.000
	I am glad to be a part of my team.	24.625	1	24.625	23.110	<.001	.126	23.110	.998
	Being part of this team gives me a good feeling.	13.924	1	13.924	9.834	.002	.058	9.834	.876
	I have a lot in common with the average member of my team.	21.770	1	21.770	20.478	<.001	.113	20.478	.994
	I am similar to the average member of my team.	39.060	1	39.060	38.427	<.001	.193	38.427	1.000
	My team members have a lot in common with each other.	28.129	1	28.129	38.182	<.001	.192	38.182	1.000

	My team members are very similar to each other.	37.507	1	37.507	46.777	<.001	.225	46.777	1.000
Itiseasyformetounderstan	I feel a bond with my team.	12.357	1	12.357	7.511	.007	.045	7.511	.778
dwhatCharlieisexperienci ng	I feel solidarity with my team.	3.575	1	3.575	2.411	.122	.015	2.411	.339
	I feel committed to my team.	5.099	1	5.099	5.596	.019	.034	5.596	.652
	I am glad to be a part of my team.	6.037	1	6.037	5.665	.018	.034	5.665	.658
	Being part of this team gives me a good feeling.	3.940	1	3.940	2.783	.097	.017	2.783	.382
	I have a lot in common with the average member of my team.	6.046	1	6.046	5.688	.018	.034	5.688	.659
	I am similar to the average member of my team.	2.539	1	2.539	2.498	.116	.015	2.498	.349
	My team members have a lot in common with each other.	2.751	1	2.751	3.734	.055	.023	3.734	.484
	My team members are very similar to each other.	.771	1	.771	.961	.328	.006	.961	.164
Itdistressesmewhenother ssuffer	I feel a bond with my team.	7.754	1	7.754	4.713	.031	.028	4.713	.578
	I feel solidarity with my team.	4.068	1	4.068	2.743	.100	.017	2.743	.377
	I feel committed to my team.	9.256	1	9.256	10.159	.002	.059	10.159	.887
	I am glad to be a part of my team.	.687	1	.687	.645	.423	.004	.645	.126
	Being part of this team gives me a good feeling.	6.098	1	6.098	4.307	.040	.026	4.307	.541
	I have a lot in common with the average member of my team.	3.968	1	3.968	3.733	.055	.023	3.733	.484
	I am similar to the average member of my team.	4.308	1	4.308	4.238	.041	.026	4.238	.534
	My team members have a lot in common with each other.	7.812	1	7.812	10.604	.001	.062	10.604	.899
	My team members are very similar to each other.	4.799	1	4.799	5.985	.016	.036	5.985	.682
Igetastrongurgetohelpoth erswhoaredistressed	I feel a bond with my team.	.307	1	.307	.187	.666	.001	.187	.071
	I feel solidarity with my team.	.550	1	.550	.371	.543	.002	.371	.093
	I feel committed to my team.	2.593	1	2.593	2.846	.094	.017	2.846	.389
	I am glad to be a part of my team.	1.409	1	1.409	1.322	.252	.008	1.322	.208
	Being part of this team gives me a good feeling.	.100	1	.100	.070	.791	.000	.070	.058
	I have a lot in common with the average member of my team.	3.074	1	3.074	2.892	.091	.018	2.892	.394
	I am similar to the average member of my team.	5.640	1	5.640	5.549	.020	.033	5.549	.649
	My team members have a lot in common with each other.	5.183	1	5.183	7.036	.009	.042	7.036	.751
	My team members are very similar to each other.	5.103	1	5.103	6.364	.013	.038	6.364	.708
Whatisyourage	I feel a bond with my team.	9.099	1	9.099	5.531	.020	.033	5.531	.647
	I feel solidarity with my team.	.238	1	.238	.160	.689	.001	.160	.068
	I feel committed to my team.	1.192	1	1.192	1.308	.254	.008	1.308	.206

	I am glad to be a part of my team.	1.462	1	1.462	1.372	.243	.008	1.372	.214
	Being part of this team gives me a good feeling.	3.006	1	3.006	2.123	.147	.013	2.123	.305
	I have a lot in common with the average member of my team.	2.733	1	2.733	2.571	.111	.016	2.571	.357
	I am similar to the average member of my team.	.380	1	.380	.374	.542	.002	.374	.093
	My team members have a lot in common with each other.	.499	1	.499	.677	.412	.004	.677	.129
	My team members are very similar to each other.	.409	1	.409	.510	.476	.003	.510	.109
RandomStimulusAssignm ent	I feel a bond with my team.	5.691	1	5.691	3.459	.065	.021	3.459	.456
ent	I feel solidarity with my team.	.459	1	.459	.310	.579	.002	.310	.086
	I feel committed to my team.	.156	1	.156	.171	.679	.001	.171	.070
	I am glad to be a part of my team.	.277	1	.277	.260	.611	.002	.260	.080
	Being part of this team gives me a good feeling.	.605	1	.605	.428	.514	.003	.428	.100
	I have a lot in common with the average member of my team.	.852	1	.852	.802	.372	.005	.802	.145
	I am similar to the average member of my team.	4.014	1	4.014	3.949	.049	.024	3.949	.506
	My team members have a lot in common with each other.	1.140	1	1.140	1.547	.215	.010	1.547	.235
	My team members are very similar to each other.	.269	1	.269	.335	.564	.002	.335	.089
Error	I feel a bond with my team.	264.881	161	1.645					
	I feel solidarity with my team.	238.801	161	1.483					
	I feel committed to my team.	146.687	161	.911					
	I am glad to be a part of my team.	171.554	161	1.066					
	Being part of this team gives me a good feeling.	227.946	161	1.416					
	I have a lot in common with the average member of my team.	171.152	161	1.063					
	I am similar to the average member of my team.	163.652	161	1.016					
	My team members have a lot in common with each other.	118.609	161	.737					
	My team members are very similar to each other.	129.096	161	.802					
Total	I feel a bond with my team.	3261.000	167						
	I feel solidarity with my team.	3550.000	167						
	I feel committed to my team.	4328.000	167						
	I am glad to be a part of my team.	4270.000	167						
	Being part of this team gives me a good feeling.	3722.000	167						
	I have a lot in common with the average member of my team.	3020.000	167						

	I am similar to the average member of my team.	3307.000	167				
	My team members have a lot in common with each other.	3066.000	167				
	My team members are very similar to each other.	2988.000	167				
Corrected Total	I feel a bond with my team.	301.665	166				
	I feel solidarity with my team.	253.210	166				
	I feel committed to my team.	162.994	166				
	I am glad to be a part of my team.	184.515	166				
	Being part of this team gives me a good feeling.	245.090	166				
	I have a lot in common with the average member of my team.	185.605	166				
	I am similar to the average member of my team.	176.886	166				
	My team members have a lot in common with each other.	131.868	166				
	My team members are very similar to each other.	137.102	166				

a. R Squared = .122 (Adjusted R Squared = .095)

b. R Squared = .057 (Adjusted R Squared = .028)

c. R Squared = .100 (Adjusted R Squared = .072)

d. R Squared = .070 (Adjusted R Squared = .041)

e. R Squared = .070 (Adjusted R Squared = .041)

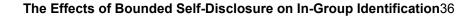
f. R Squared = .078 (Adjusted R Squared = .049)

g. R Squared = .075 (Adjusted R Squared = .046)

h. R Squared = .101 (Adjusted R Squared = .073)

i. R Squared = .058 (Adjusted R Squared = .029)

j. Computed using alpha = .05



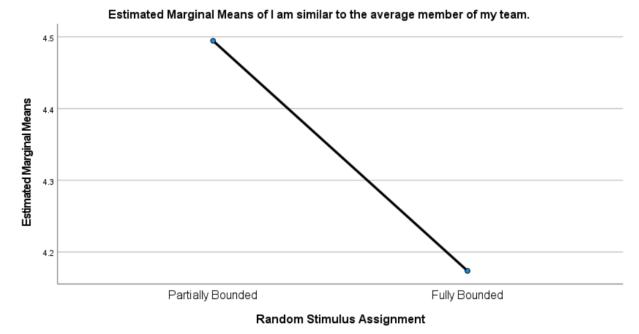


Chart C2 – Estimated Marginal Means of I am similar to the average member of my team

Covariates appearing in the model are evaluated at the following values: It is easy for me to understand what Charlie is experiencing. = 5.47, It distresses me when others suffer. = 5.69, I get a strong urge to help others who are distressed. = 5.46, What is your age? = 2.80