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The Effects of an Empirically-Based Wise Intervention on Attitudes Toward Diversity

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Research shows that bias against a group, explicit or implicit, can result in differential treatment of those different groups' members (Devine, 1989). These biases reveal themselves even through small things like microaggressions toward minority group members, or anxiety when approaching an intergroup interaction (Pettigrew, 1998; Stephan & Stephan, 1985). It is these types of discriminatory actions that have led to reports of racial bias, insensitivity, and isolation for Black students on Purdue's campus (Flores, 2015). Research also shows, however, that strategies like self-regulating prejudice (Monteith, 1993), confronting bias (Czopp, Monteith, & Mark, 2006), and acknowledging minority-group experiences (Galinsky & Ku, 2004; Galinsky & Moskowitz, 2000) can effectively reduce this intergroup bias. The issue, then, is how to implement these psychological theories in a practical way that will foster intergroup interaction and inclusion among students on a predominantly-white campus.

With this empirical foundation of strategies to combat disparate treatment of minority group members, we set out to use the social psychological literature related to intergroup relations to design a program to encourage positive intergroup behavior and inclusions among diverse university students, and to test the efficacy of this program. We took note of the current attitudes of students toward diversity and, through a series of focus groups, determined some of the biggest hurdles for students' interactions with diversity so as to best address these issues and concerns. To that end, we developed an intervention based in theories of wise interventions, incremental mindset, and self-determination theory, designed to train Purdue students in empirically-supported strategies to reduce bias and foster intergroup interaction.

# **Wise Interventions**

In order for our intervention to be successful, it needs to have some staying power. Presenting strategies to students may reduce their immediate responses of bias, but we wanted our intervention to have longitudinal effects, and so constructed it within the framework of a wise intervention. Wise interventions target the specific psychological processes behind a social problem or problematic behavior and try to change how a person thinks or feels in order to produce a positive end (Walton, 2014). To be effective, a wise intervention builds on a well-defined psychological theory (Walton, 2014), which then allows for precision of methodology and insight into the psychological principles underlying people's

behavior. The most relevant point about wise interventions is that they involve small interventions introduced at a critical time for participants, which may have psychological and behavioral outcomes that build across time in a recursive manner. Thus, ultimately, these small interventions can end up having large effects across time.

## **Psychological Framing**

Our intervention drew from well-supported social psychological theories: namely, selfdetermination theory, to target students' intrinsic motivation to engage positively with diversity, and incremental theory, to debunk any preconceived notions students may hold regarding the fixedness of any intergroup biases they may hold or anxieties about interacting with people different from them.

Self-Determination Theory and Motivation. Self-determination theory (e.g., Ryan & Deci, 2000) proposes that there are two types of motivation: intrinsic, which comes from doing something because it is itself enjoyable; and extrinsic, doing something because of an external outcome resulting from the activity at hand. Research has found that not only tasks that hold a person's interest are pursued by intrinsic motivation, but also that by internalizing the values behind something ordinarily involving extrinsic motivation, even tasks that are initially viewed as uninteresting can then be motivated intrinsically (Ryan & Deci, 2000). Our intervention, therefore, stressed the personal value of diversity, resulting in an intrinsic motivation to engage with diversity on campus.

Autonomy. An important factor in fostering the internalization of the strategies presented in our intervention involves presenting material and arguments in a way that appeals to a person's sense of autonomy. One of the factors essential to maintaining intrinsic motivation is that people must have a sense of autonomy (Ryan & Deci, 2000). Autonomy is important when presenting people with reasons to be egalitarian-minded and inclusive, as interventions that restrict people's autonomy can actually increase negative intergroup attitudes (Legault & Amiot, 2014). Successful interventions should encourage valuing equality and diversity on a personal level, rather than telling people how to think and feel. An autonomy-supportive environment is less cognitively depleting (Muraven, 2008) and is directly related to intrinsic motivation (Muraven, Gagné, & Rosman, 2008). Drawing from work on autonomy support in the

classroom, our intervention provided meaningful rationale as to why a variety of inclusive behaviors are beneficial to the individual, acknowledged the intergroup concerns of both majority and minority group students, and used language that emphasized choice and positivity in order to facilitate intrinsicallymotivated outcomes (Nuñez & León, 2015).

Incremental Mindset. Before people can learn how to change their biases or overcome anxieties about interacting with people who are different from them, they must believe that change is possible. An incremental mindset is the belief that human traits, like prejudice, are not fixed and can change and be changed over time (Dweck, Chiu, & Hong, 1995). This was an important thread to maintain throughout the intervention, emphasizing the progressive nature of learning about diversity and practicing inclusion, and building these skills across time. People are also more likely to confront others about their prejudiced views if they believe that prejudice can be reduced than if they believe it is fixed (Rattan & Dweck, 2010). This was another important concept to cement through the intervention, else the strategies and methods introduced for combating prejudice on Purdue's campus may fall on the dismissive ears of students who claim that people simply do not change.

## **Intervention Content**

Research shows that despite a person's explicit attempts to support diversity, biases often operate at an implicit, unconscious level and result in discriminatory treatment (Devine, 1989). Thus, important issues to address in the intervention were the existence of implicit biases and how to recognize and combat them. Also, in accordance with an autonomy-supportive presentation, it was important that the intervention discuss both minority and majority group experiences, as well as strategies for intergroup contact (Galinsky & Moskowitz, 2000; Galinsky & Ku, 2004; Pettigrew, 1998; Stephan & Stephan, 1985).

**Implicit bias and self-regulation.** The most obvious solution to disparate treatment would be to simply eliminate the behavior altogether, which is easier said than done. Implicit biases are discriminatory responses based on implicit attitudes or stereotypes, functioning outside of conscious attentional focus (Greenwald & Banaji, 1995). Though stereotypes may not be consciously endorsed, any individual person

in the right situation may exhibit implicit bias. People act based on stereotypes, even those who espouse equality, because knowledge of cultural stereotypes can operate subconsciously (Devine, 1989).

The challenge, then, becomes how to gain control over implicit biases and act instead according to one's conscious beliefs. Monteith's (1993) Self-Regulation of Prejudice Model presents automated prejudiced responses—divergent from a person's explicit values of equality—as a habit to be broken by associating negative feelings after people realize they exhibited prejudice with the situation in which it was implicitly activated. People can then establish a conscious regulatory process, to be cued in any similar situation where similar prejudice could be unintentionally expressed. The efficacy of this model is supported by both research (e.g., Monteith, 1993; Monteith, Ashburn-Nardo, Voils & Czopp, 2002) and reports of people using self-regulation in their everyday lives (Monteith, Mark, & Ashburn-Nardo, 2010). This strategy of self-regulating automatic prejudice was an important part of making people aware of their reliance on stereotypes and giving them tools for combating implicit bias.

Effective confrontation strategies. It's important to note that not only can someone take steps to regulate their own prejudice, but they can be instrumental in the regulation of the prejudice of others as well. Interpersonal confrontations about expressions of prejudice lead to the confronted becoming aware of their bias, giving them an opportunity to self-regulate (Monteith, 1993). Both hostile and polite confrontations of prejudice can result in a reduction of biased behavior (Czopp, Monteith, & Mark, 2006). Whereas a confrontation instigated by a member of the target group (e.g., Blacks in the case of anti-Black racial bias) is often perceived as complaining, a confrontation from a non-target group member (e.g., Whites in the case of racism) is more likely to be persuasive (Czopp & Monteith, 2003; Gulker, Mark, & Monteith, 2013). This illustrates the importance of majority group members taking responsibility to speak up when they observe prejudice and discrimination. As we worked to combat differential treatment based on group membership, training students to confront instances of prejudice that they witness on campus was an important strategy to include in the intervention.

**Minority group experiences.** Another important facet of an intervention to foster positive intergroup behavior is the acknowledgment of common experiences among underrepresented minority

group students. This not only raises awareness among majority group students so that they are better able to take perspective—an important contributor to prejudice reduction (Galinsky & Moskowitz, 2000)—but also can be positive for minority group students (Galinsky & Ku, 2004). Minority group members experience high levels of stress and anxiety in intergroup interaction (Trawalter, Richeson, & Shelton, 2009), and are often unsure of the source of majority group members' actions. Discussing minority group members' experiences in the mixed company of a group intervention presentation provides opportunity for intergroup dialogue and establishing a new understanding on both sides of the conversation.

Intergroup contact. In the face of such anxieties, how can intergroup interaction be a positive experience? Research shows that even minimal intergroup contact is better than none at all (Dovidio, Gaertner, & Kawakami, 2003), but also that even nominal interaction is subject to anxiety. Pluralistic ignorance describes the phenomenon when people on two sides of a situation believe that the other feels differently than they do, despite behaving in the same way (Shelton & Richeson, 2005). For example, a White student may neglect to engage in conversation with a Black student when they're sitting in an otherwise empty classroom because the White student wants to keep from embarrassing themselves. The Black student may feel the same way, and not strike up a conversation for fear of awkwardness. This phenomenon prevents interaction, and understanding its foundation is vital for both minority and majority group members to overcome it and initiate even marginal intergroup contact.

Majority group members also experience anxiety in intergroup interaction situations: they often report a fear of doing something wrong, which can lead to avoiding intergroup contact (Pettigrew, 1998; Stephan & Stephan, 1985). It is important to educate people on how to approach intergroup contact opportunities instead of avoiding them (Apfelbaum, Sommers, & Norton, 2008), and how to respectfully ask about and discuss differences (Cheryan & Monin, 2005) if the issues of group inequality are to ever be resolved.

## **Current Research**

The goals of the present research were to design and implement an orientation program that would function as a wise intervention to address students' attitudes and behaviors in relation to diversity and inclusion. To test this, we administered the presentation to a sample of Purdue freshmen at the start of their first semester. They reported on items such as diversity engagement intentions, motivation to self-regulate bias, stigma consciousness, identification with Purdue, belonging, and self-esteem, among others. We hypothesized that receiving the intervention would elicit more positive attitudes toward diversity among students.

# Method

### **Participants and Design**

Two hundred and seventy-eight students ( $M_{age} = 18.3$  years, SD = .70; 42.5% male; 88.5% domestic) at Purdue University were randomly assigned to either the Control condition (n = 151) or the Intervention condition (n = 127). Participants were recruited through Residential Life from freshman residence halls, and randomly assigned in groups based on residential floor to one of four sessions (two intervention, two control). This was a 2 x 2 between-participants design study, also assessing majority versus minority (operationalized as White versus Nonwhite) students.

## Materials

**Presentations.** The presentation in the intervention condition addressed themes of implicit bias awareness, self-regulation of prejudice, confrontation of bias, interaction anxiety, pluralistic ignorance, minority group experiences. Each topic was presented on a series of PowerPoint slides, accompanied by a verbal presentation. Distributed throughout the presentation were six five-minute videos, each elaborating on a specific point of the intervention. Professionally scripted, filmed, and acted, the videos were intended to keep subjects engaged in the intervention, but also simulate real-world application of the presentation content. The control presentation briefly provided an overview of Purdue's diversity statistics but contained none of the intervention content.

**Outcome measures.** Outcome measures included a battery of scales, but those relevant to this analysis assessed Diversity Engagement Intentions (Bogardus, 1928; Dion, 1985; Esses & Dovidio, 2002; M = 5.43, SD = .96; 6 items,  $\alpha = .90$ , ex. "How motivated are you to get to know students who have

different backgrounds, cultures, ideologies, and identities?" "How willing are you to work on a class project or study with a student from a different background than you?"), Motivation to Self-Regulate (developed for this study; M = 5.21, SD = 1.24; 4 items,  $\alpha = .65$ , ex. "I am motivated to be on guard so that stereotypes do not affect my judgments about others."), Stigma Consciousness (M = 2.74, SD = .97; 9 items,  $\alpha = .60$ , ex. "Do you think other people at Purdue would be surprised or not surprised if you or people like you succeeded in school?" "In general, I feel like Purdue is a welcoming place for students from diverse backgrounds."), Belonging (Walton & Cohen, 2007; M = 5.84, SD = .93; 12 items,  $\alpha = .90$ , ex. "I belong at Purdue," "Other students at Purdue accept me."), Identification with Purdue (adapted Sellers, et al., 1998; M = 4.82, SD = 1.04; 6 items,  $\alpha = .81$ , ex. "In general, being a Purdue student is an important part of my self-image."), and Self-Esteem (Rosenberg, 1965; M = 3.77, SD = .77; 10 items,  $\alpha = .89$ , ex. "On the whole, I am satisfied with myself.") (see Appendix A for full scales).

# Procedure

Participants arrived in groups according to their residential floor to either a conference room or lecture hall on campus, where they were provided food and administered one of the two presentations. The intervention presentations were an hour long; the control presentations were 15 minutes. The participants then completed the outcome measures, and once completed, were excused. One control and one intervention session took place at midday, and another control session and intervention session took place in the evening.

# Results

The outcome measures were analyzed in a series of 2 (intervention vs. control condition) x 2 (White vs. Nonwhite) ANOVAs. Analyses were run with a dichotomized (male/female) gender variable in order to control for gender in other analyses, which excluded 10 participants who responded "Other" or did not respond.

Nonwhite students reported significantly lower Belonging (M = 5.42, SD = 1.03) than did White students (M = 6.02, SD = .84), F(1,268) = 25.08, p < .01. Nonwhite students also reported lower Identification with Purdue (M = 4.56, SD = 1.03) than White students (M = 4.93, SD = 1.03),F(1,268) = 1.03

5.9, p = .02, and higher Stigma Consciousness (M = 3.22, SD = 1.14) than White students (M = 2.56, SD = .8), F(1,269) = 31.61, p < .01. The intervention did not affect these measures. The results suggest instead that Whites and non-Whites enter Purdue with different levels of belonging, identification, and stigma consciousness.

The interaction between Condition and Race was marginally significant when predicting Diversity Engagement, F(1, 270) = 3.21, p = .07. Among Whites, participants in the intervention condition reported greater intentions to engage with people who are different from them (M = 5.52, SD =.88) than participants in the control condition (M = 5.13, SD = .96), t(188) = 2.76, p < .01. Among non-Whites, intentions to engage with people different from the self were high in both the intervention (M =5.36, SD = 1.05) and control conditions (M = 5.51, SD = .96), t(82) .67, p = .50. With respect to the efficacy of the intervention, this demonstrates that receiving the intervention did have a significant effect on White students' willingness and motivation to engage with diverse others.

The main effect of Condition on Motivation to Self-Regulate was significant, F(1,267) = 4.34, p = .04, indicating higher motivation to self-regulate among participants in the Intervention condition (M = 5.38, SD = 1.19) compared to those in the Control condition (M = 5.1, SD = 1.02). In terms of the intervention's efficacy, this shows that the intervention had a significant effect on students' motivation to regulate their prejudice.

The main effect of Condition on Self-Esteem was significant, F(1,266) = 5.59, p = .02, showing higher self-esteem among participants in the Intervention condition (M = 3.87, SD = .77) compared to those in the Control condition (M = 3.64, SD = .76). Again, in terms of efficacy, this demonstrates that all students receiving the intervention also reported higher scores on measures of psychological well-being.

#### Discussion

Nonwhite students scored lower than White students on measures of belonging at and identification with Purdue, as well as being more aware of racial stigma compared to White students. While we would have expected that the intervention would boost feelings of belonging and identification with Purdue, this finding demonstrates a preexisting inequality of race, such that Nonwhite students start off at a disadvantage regarding feeling like they belong at Purdue.

White students in the Control condition reported lower intentions to engage with diversity than White students in the Intervention condition, which is in accordance with our hypotheses. However, condition did not have a significant effect among Nonwhite students. This could be explained by the nature of the diversity statistics at Purdue, which both the Intervention and the Control presentations included. Nonwhite students may have, upon seeing the preponderance of majority group students represented on campus, assumed that they had no choice but to engage with students different from them, therefore reporting no significant difference in Diversity Engagement Intentions.

Students receiving the intervention significantly boosted Motivation to Self-Regulate Prejudice, in accordance with our hypotheses. Students in the Intervention condition also reported significantly higher self-esteem than those in the Control condition, demonstrating a condition-dependent boost in psychological well-being. This is an encouraging finding, demonstrating that even after revealing the incidence of bias, participants' psychological well-being was ultimately boosted by the intervention.

Longitudinal data collection is being conducted currently to determine the efficacy of the wise intervention framework. While these initial results are promising, it remains to be seen if the same motivations to regulate prejudice and intentions to engage in intergroup contact will be long-lasting. These results, however, demonstrate that students are willing and motivate to amend their bias, and so we can infer that they believe—at least to some extent—that their levels of bias can change, in keeping with the incremental mindset in which we framed the intervention. The longitudinal data will help establish whether the recursive nature of the strategies the students were taught, an important tenet of wise interventions, aided in their long-term attitudes toward diversity. The autonomy-supportive language of the intervention seems to have facilitated the boost to willingness and motivation to engage diversity, as laid out by the self-determination theory.

One limitation of this study was the dichotomization of Race. In the future, the same intervention paradigm could be replicated, but with a large, diverse enough sample to address differential feelings

among different racial minority groups, as well as investigating any differences between domestic and international students (who were collapsed into the Nonwhite category in this study). Another potential direction is to investigate the same minority vs. majority-group responses operationalized non-racially— for example, gender, sexual orientation, or perhaps even political leanings. Another limitation of the current study was the pseudo-randomization of groups. Since students attended the sessions in cohorts determined by their residential floor, it would be interesting to see if there are any notable differences among participants who have no knowledge or relationship with the other participants in the room. An additional future direction for a similar study would be to vary the race and/or gender of the presenter of the intervention. For the purposes of this study, the presenter was a white woman. Age, too, could be manipulated.

### Conclusions

The observed race main effects on measures of perceived diversity at Purdue indicate that Nonwhite students can be characterized as feeling less belonging and identification and more stigma consciousness after arriving on a predominantly White campus. Students' willingness and intentions to engage with different others, motivation to self-regulate bias, and self-esteem were all boosted by our intervention, which is promising for its full-scale implementation at Fall 2017's freshman orientation. The differences we see between conditions indicate there is some quantifiable change attributable at least in part to the intervention. Further analysis of longitudinal data collected in waves following the presentation will identify any long-term effects, as well as provide results on additional measures; for example, actual engagement and academic outcomes.

# Appendix A

#### Belonging (Walton & Cohen, 2007)

- $\alpha$  = .90, *Scale*: 1 (strongly disagree) to 7 (strongly agree)
- 1. I belong at Purdue.
- 2. Other students at Purdue accept me.
- 3. I feel alienated from Purdue.
- 4. I fit in well at Purdue.
- 5. Students at Purdue are a lot like me.
- 6. I can be myself at Purdue.
- 7. I feel that I have to hide who I am at Purdue.
- 8. I feel like an outsider at Purdue.
- 9. I feel comfortable at Purdue.
- 10. Sometimes I feel that I belong at Purdue, and sometimes I feel that I don't belong at Purdue.
- 11. When something good happens, I feel that I really belong at Purdue.
- 12. When something bad happens, I feel that maybe I don't belong at Purdue.

# Identification with Purdue (adapted Sellers et al., 1997)

- $\alpha$  = .81, *Scale: 1 (strongly disagree) to 7 (strongly agree)*
- 1. Overall, being a Purdue student has very little to do with how I feel about myself.
- 2. In general, being a Purdue student is an important part of my self-image.
- 3. Being a Purdue student is unimportant to my sense of what kind of person I am.
- 4. I have a strong sense of belonging to Purdue.
- 5. I have a strong attachment to Purdue
- 6. Being a Purdue student is an important reflection of who I am.

### Stigma Consciousness

 $\alpha$  = .60, *Scale: 1 (never/not at all) to 7 (frequently/a lot)* 

1. Do you think other people at Purdue would be surprised or not surprised if you or people like you succeeded in school?

2. At Purdue, to what extent do you worry that people negatively judge you, based on what they think about your racial group?

3. At Purdue, to what extent do you worry that people negatively judge you, based on what they think about your social class background?

4. To what extent do minority-group students (e.g., racial, ethnic, sexual, religious minorities) experience

bias, discrimination, or other unfair treatment at Purdue?

5. It seems like it would be okay to talk about race and other identities at Purdue.

6. In general, I feel like Purdue is a welcoming place for students from diverse backgrounds.

7. I feel like I will have to hide part of who I am at Purdue.

8. I feel included in Purdue's definition of diversity.

9. My group is included in Purdue's definition of diversity.

### Diversity Engagement Intentions (Bogardus, 1928; Dion, 1985; Esses & Dovidio, 2002)

 $\alpha$  = .90, *Scale: 1 (not at all willing) to 7 (very willing)* 

1. How motivated are you to get to know students who have different backgrounds, cultures, ideologies, and identities?

How willing are you to...

- 2. Work on a class project or study with a student from a different background than you?
- 3. Strike up a conversation after class with a student from a different background than you?
- 4. Attend a party or social event with a student from a different background than you?
- 5. Attend an event sponsored by a Purdue Cultural Center?
- 6. Become a member of an identity-based organization (e.g., Black Student Union, LGBTQ+ Alliance)?

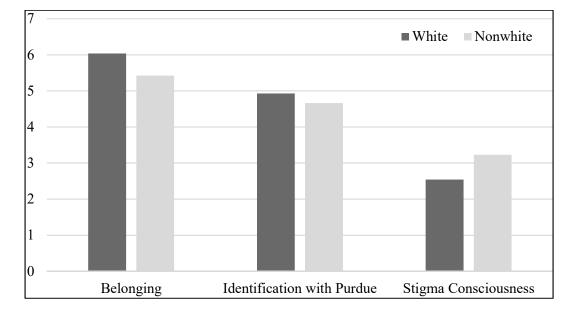
# Motivation to Self-Regulate (developed by Monteith)

- $\alpha$  = .65, *Scale: 1 (strongly disagree) to 7 (strongly agree)*
- 1. I am motivated to be on guard so that stereotypes do not affect my judgments about others.
- 2. Frankly, I am not worried about monitoring my words and actions so that they are non-prejudiced.
- 3. I am willing to experience some guilt if it will help me to learn not to be biased toward others.
- 4. I want to become aware of any stereotypes I may hold about groups that could influence my reactions.

### Self-Esteem (Rosenberg, 1965)

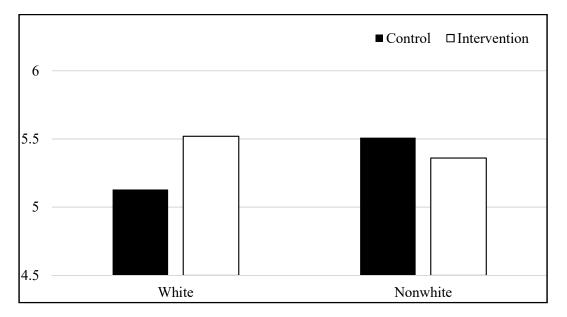
 $\alpha$  = .89, *Scale: 1 (not very true of me) to 5 (very true of me)* 

- 1. On the whole, I am satisfied with myself.
- 2. I feel that I am a person of worth, at least on an equal plane with others.
- 3. I feel that I have a number of good qualities.
- 4. All in all, I am inclined to feel that I am a failure.
- 5 I am able to do things as well as most other people.
- 6. I take a positive attitude toward myself.
- 7. I wish I could have more respect for myself.
- 8. I certainly feel useless at times.
- 9. I feel I do not have much to be proud of.
- 10. At times I think I am no good at all.



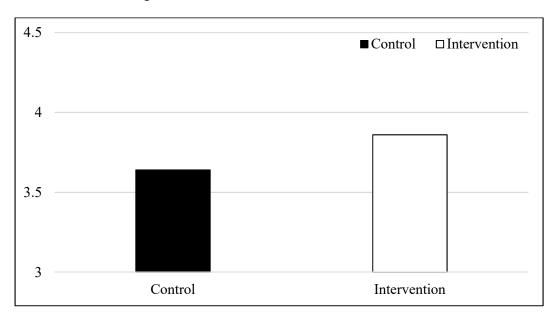
Differential Purdue Experience

# **Diversity Engagement Intentions**

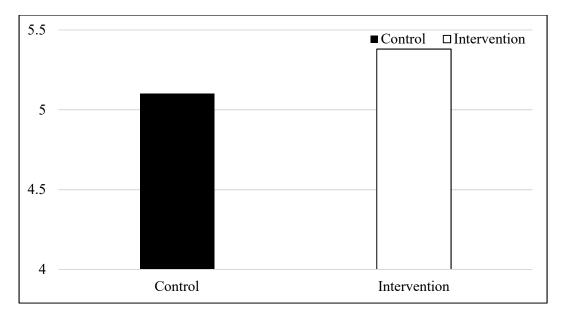


# Appendix B

Motivation to Self-Regulate



Self-Esteem



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