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"Getting Ahead" Versus "Getting Along": Examining the Role of Agency and Communion in Prejudice

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“GETTING AHEAD” VERSUS “GETTING ALONG”:
EXAMINING THE ROLE OF AGENCY AND COMMUNION IN PREJUDICE

by

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THESIS

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Abstract

The topic of prejudice has been extensively studied by psychologists, but there has been no work directly examining whether agency (“getting ahead”) and communion (“getting along”) influence prejudiced attitudes. Across three studies we examined whether these dimensions differentially motivate prejudiced attitudes towards immigrants and Syrian refugees. We expected that agency would positively predict prejudice for those low in communion but not for those high in communion and that a self-threat would amplify this effect. Additionally, we examined unmitigated agency (focus on agency to the exclusion of communion, distinct from high agency and low communion as separate factors) as it has been linked to other problem behaviours (Helegson, 1999). In Study 1, inconsistent with our predictions, we found that high agency or low communion may motivate prejudice towards immigrants. In Study 2 and 3 we examined whether a co-operation focus (balance of agency and communion) or competition focus (strong agency, lack of communion) predicted prejudice towards Syrian refugees. We found some evidence that a focus on co-operation could reduce the positive relation between unmitigated agency and negative attitudes towards Syrian refugees. We did not find any consistent evidence supporting our main predictions with the addition of a self-threat in Study 3. Across all three studies, our most consistent finding was that unmitigated agency was positively associated with prejudice and predictors of prejudice established in past research. Overall, our findings did not yield consistent evidence that agency and communion motivate prejudice, and instead suggest that unmitigated agency may be a distinctly motivating factor for prejudice.

Keywords: agency, communion, unmitigated agency, prejudice, self-enhancement, threat

AGENCY AND COMMUNION IN PREJUDICE

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Table of Contents

Abstract.....	i
Acknowledgments.....	ii
Table of Contents.....	iii
List of Tables.....	v
List of Figures.....	vii
Introduction.....	1
Prejudice as Self-Enhancement.....	1
Agency and Communion: The Big Two.....	4
Agency, Communion and Known Predictors of Prejudice	6
The Current Research.....	9
Study 1.....	10
Method.....	10
Results.....	14
Discussion.....	18
Study 2.....	18
Method	22
Results.....	27
Discussion.....	35
Study 3.....	39
Method	39
Results.....	40

Discussion.....	43
General Discussion.....	51
Limitations and Future Directions.....	57
Conclusion.....	61
References.....	63
Tables.....	71
Figures.....	84
Appendices.....	89
Appendix A.....	89
Appendix B.....	99
Appendix C.....	112

List of Tables

Table 1	
<i>Overall Descriptive Statistics and Inter-Measure Correlations (Study 1)</i>	71
Table 2	
<i>Regression Coefficients for Authoritarian Ideologies (Study 1)</i>	71
Table 3	
<i>Regression Coefficients for Prejudiced Attitudes Regression (Study 1)</i>	72
Table 4	
<i>Overall Descriptive Statistics and Inter-Measure Correlations (Study 2)</i>	72
Table 5	
<i>Manipulation Check Variables by Article Condition, Controlling for Pre-Test EPAQ Scores (Study 2)</i>	74
Table 6	
<i>Prejudiced Attitudes by Article Condition and Pre-Test EPAQ Scores (Study 2)</i>	75
Table 7	
<i>Realistic Threat by Article Condition and Pre-Test EPAQ Scores (Study 2)</i>	75
Table 8	
<i>Symbolic Threat by Article Condition and Pre-Test EPAQ Scores (Study 2)</i>	76
Table 9	
<i>Intergroup Anxiety by Article Condition and Pre-Test EPAQ Scores (Study 2)</i>	76
Table 10	
<i>Regression Coefficients for Prejudiced Attitudes predicted by Manipulation Check Variables (Study 2)</i>	77
Table 11	
<i>Regression Coefficients for Realistic Threat predicted by Manipulation Check Variables (Study 2)</i>	77
Table 12	
<i>Regression Coefficients for Symbolic Threat predicted by Manipulation Check Variables (Study 2)</i>	77
Table 13	
<i>Regression Coefficients for Intergroup Anxiety predicted by Manipulation Check Variables (Study 2)</i>	78

Table 14	
<i>Regression Coefficients for Self-Esteem Time 2 (Study 2)</i>	78
Table 15	
<i>Overall Descriptive Statistics and Inter-Measure Correlations (Study 3)</i>	79
Table 16	
<i>Manipulation Check Variables by Article Condition (Study 3)</i>	80
Table 17	
<i>Prejudice Dependent Variables by Article and Feedback Condition (Study 3)</i>	81
Table 18	
<i>Regression Coefficients for Prejudiced Attitudes predicted by Manipulation Check Variables (Study 3)</i>	81
Table 19	
<i>Regression Coefficients for Realistic Threat predicted by Manipulation Check Variables (Study 3)</i>	82
Table 20	
<i>Regression Coefficients for Symbolic Threat predicted by Manipulation Check Variables (Study 3)</i>	82
Table 21	
<i>Regression Coefficients for Intergroup Anxiety predicted by Manipulation Check Variables (Study 3)</i>	83

List of Figures

Figure 1	
<i>Agency and communion predicting authoritarian ideologies.....</i>	84
Figure 2	
<i>Agency and communion predicting prejudiced attitudes.....</i>	84
Figure 3	
<i>Zero-sum beliefs means across conditions.....</i>	85
Figure 4	
<i>Narcissism lay beliefs means across conditions.....</i>	85
Figure 5	
<i>Pre-test unmitigated scores by condition predicting prejudiced attitudes.....</i>	86
Figure 6	
<i>Agency means across article conditions.....</i>	86
Figure 7	
<i>Unmitigated agency means across article conditions.....</i>	87
Figure 8	
<i>Zero-sum beliefs means across article conditions.....</i>	87
Figure 9	
<i>Narcissism lay beliefs means across article conditions.....</i>	88

Everyone has their own set of motives, values, and beliefs that drive their day to day decisions and behaviour. Agency, or “getting ahead” and communion, or “getting along” (Hogan 1982), reflect two broad classes of motives that drive individuals in their day to day lives (Bakan, 1966). The importance placed on either of these sets of motives varies across individuals, and this balance, or lack thereof, has significant implications for behaviour. In the current research, we investigate whether agency and communion influence prejudiced attitudes and ideologies relevant to prejudice. The present research builds upon past work that has identified various attitudes and beliefs that may contribute to prejudice as well as a self-enhancement theory of prejudice.

In the following sections, we review previous research examining agency, communion, ideologies related to prejudice, and prejudiced attitudes. Furthermore, we outline a rationale for why and how these factors may be interrelated. Following this, we present our hypotheses as well as three experiments that test the relations between agency, communion and prejudiced attitudes.

Prejudice as Self-Enhancement

Prejudice is a topic that has been studied extensively by psychologists because it is a complex and wide-reaching issue with immense negative implications and numerous antecedents. Prejudice can be defined as expressing preconceived negative affect, both emotional (e.g., hatred and disdain) and evaluative (e.g., disliking and disapproval), toward out-group members (Stephan & Stephan, 2000). For the purpose of this proposal, we will focus on past research examining prejudice with a self-enhancement focus as we believe the dimensions of agency and communion could inform prejudice particularly in this context. Wills (1981) asserted

that prejudice is a form of downward social comparison motivated by self-enhancement. Specifically, individuals are driven to view out-group members as downward comparison targets in order to maintain self-esteem, status, and in-group distinction (Wills, 1981). Fein and Spencer (1997) extend this self-enhancement hypothesis, suggesting that prejudice can be motivated by self-protection; that is, the motive to restore threatened positive self-views. In response to a self-threat (i.e., negative feedback on an intelligence test), participants were more likely to apply negative stereotypes to an out-group member, and in doing so increase their self-esteem (Fein & Spencer, 1997; Jordan, Spencer, & Zanna, 2005). Fein and Spencer also examined the buffering effects of self-affirmation (i.e., having participants write about an important personal value), and found that participants who self-affirmed did not derogate stereotyped groups after a self-threat. Based on this evidence, Fein and Spencer assert that prejudice may be a way to maintain one's self-image in the presence of a self-threat, as this tendency is mitigated by the opportunity for participants to self-affirm as a form of self-image maintenance.

The major feature that Wills' (1981) and Fein and Spencer's (1997) hypotheses have in common is the notion that prejudice serves to increase or maintain self-evaluations, particularly self-esteem. They posit that prejudice and stereotyping are motivated by the desire to maintain and enhance self-esteem. However, there is little direct evidence of a self-esteem motive underlying prejudice or discrimination. One study does suggest that out-group derogation restores threatened self-esteem (Fein & Spencer, 1997). Another source of evidence is that self-affirmation makes out-group derogation less likely. But there is little evidence that self-esteem increases following self-affirmations, calling into question their role as alternative means of maintaining self-esteem. In fact, a review of experimental manipulations of self-affirmation by McQueen and Klein (2006) found that out of five studies that measured self-esteem as a

dependent variable only one study, which used an implicit measure of self-esteem, found a positive effect of self-affirmation on self-esteem (Koole, Smeets, van Knippenberg, & Dijksterhuis, 1999).

The effect of self-affirmation in reducing self-enhancement tendencies is cited as one of the most prevalent sources of evidence for the existence of a general motivation to maintain or enhance self-esteem. However, it remains unclear whether self-affirmation has any effect on self-esteem, and the mechanism by which self-affirmation reduces self-enhancement remains unclear. In fact, other research suggests that self-affirmations may reduce self-enhancement through an effect on self-transcendence (i.e., reminding people of things they value beyond their own self-interests; Crocker, Niiya, & Mischkowski, 2008; Burson, Crocker, & Mischkowski, 2012) rather than self-esteem.

Crocker, Niiya, and Mischowski (2008) found that after writing about an important and meaningful value, participants reported greater increased other-directed positive emotions, including love and connectedness, but not greater self-directed positive emotions, such as pride and strength. Additionally, Burson, Crocker, and Mischowski (2012) found that affirmations were more effective when affirming communal values such as empathy and compassion, than agentic values such as power and independence. Therefore there is evidence to suggest that the buffering effects of self-affirmations may work through self-transcendence, reminding people what they care about beyond themselves, rather than increasing self-esteem, and that communion in particular may play an important role (Crock et al., 2008; Burson, et al., 2012).

The current research will attempt to expand upon these findings along with earlier self-enhancement theories of prejudice by investigating arguably more basic mechanisms by which

the derogation of out-groups may be motivated. We propose that the basic motives for agency and communion may play a significant role in motivating prejudice, particularly prejudice that serves a self-enhancement function.

Agency and Communion: The Big Two

Agency and communion as defined by Bakan (1966) represent two broad and fundamental dimensions that encompass interpersonal motives, values, personality, and behaviour. The current research will investigate whether these dimensions contribute to basic mechanisms that motivate prejudice. Agency reflects concerns with status and achievement or “getting ahead,” whereas communion reflects concerns with compassion and belonging or “getting along” (Bakan, 1966; Hogan, 1982; Trapnell & Paulhus, 2012). These dimensions are clearly distinct, and it is important to note that agency and communion motives are largely independent, meaning that people can value both agency and communion simultaneously (Frimer, Walker, Dunlop, Lee, & Riches, 2011; Trapnell & Paulhus, 2012; Wiggins, 1991) and therefore they may differentially affect prejudice.

The apparent universality of agency and communion spans many sub disciplines of psychology, and as such these dimensions have been characterized as the Big Two. The dimensions defined by agency and communion have gone by many labels, ranging from “masculinity” and “femininity” (Bem, 1981) to “competence and “warmth” (Fiske, Cuddy, & Glick, 2007, and their distinctiveness and ability to organize a wide variety of psychological phenomenon is clear. For example, research suggests that agency and communion hierarchically underlie the Big Five personality dimensions (Digman, 1997; Blackburn, Renwick, Donnelly, & Logan, 2004), interpersonal behaviours (Wiggins, 1991), and social values (Trapnell & Paulhus,

2012), to name a few. Pertinent to the current research, agency and communion also characterize our perceptions of others. Liking others largely depends on their perceived communal qualities whereas respecting others is influenced by their perceived agentic qualities (Wojciszke, Abele, & Baryla, 2009). Specifically, Wojciszke, Abele, and Baryla (2009) found that perceiving others as communal leads to greater perceptions of benevolence, in turn leading to greater liking, whereas perceiving others as agentic leads to greater perceptions of status potential, which in turn leads to greater respect (Wojciszke et al., 2009). Additionally, stereotype content can be classified into these two broad dimensions, such that stereotyped groups may often be perceived as warm but not competent (e.g. housewives), or competent but not warm (e.g. business women) (Fiske, Cuddy, Glick, & Xu, 2002).

Although agency and communion have been evidenced to guide these various psychological processes, to our knowledge there has been no work investigating whether personal motives for agency and communion influence prejudice as self-enhancement. We propose that agency with its emphasis on “getting ahead,” may directly fuel prejudice, because people are concerned with distinguishing themselves and appearing better than others. On the other hand, low communion, or a lack of concern with “getting along” with others, might also increase prejudice, as people may attend less to how their beliefs and behaviour affect others, including out-group members. A balance of agency and communion may be ideal, as communion may temper the effects of agency and allow people to focus on values beyond their own self-interest. This balance was stressed by Bakan (1996) who argued that it was important for agency to be mitigated by communion to avoid negative consequences. Building on this idea, Helgeson and Fritz (1999) defined unmitigated agency as distinct from a simple combination of high agency and low communion. Unmitigated agency is instead defined as a focus on the self to

the exclusion of others, including traits such as hostility and arrogance (Helegson, 1999). In fact, unmitigated agency has been linked to problem behaviours such as relationship difficulties due to an unwillingness to attend to others (Helgeson & Fritz, 2000). It is important to note that although agency and communion can refer to numerous broad dimensions, unmitigated agency has been studied only as a personality trait (Helgeson & Fritz, 1999). Therefore, as we examine how the broad motivations for agency and communion relate to prejudice, we will also consider how unmitigated agency may be particularly likely to fuel prejudice.

Agency, Communion and Known Predictors of Prejudice

In order to examine the role of agency and communion in prejudice, it is important to understand how these dimensions are related to other known predictors of prejudice. For example, narcissism has been linked to high agency and low communion (Campbell et al., 2002; Jones & Paulhus, 2011) and has also been found to be associated with prejudice (Hodson, Hogg, & MacInnis, 2009). Authoritarian ideologies, which include social dominance orientation and right wing authoritarianism, are also both strongly predictive of prejudice (Pratto, Sidanius, Stallworth, & Malle, 1994; Altemeyer, 1998). Specifically, social dominance orientation is a preference for hierarchy among social groups and a desire for the in-group to be superior to out-groups (Pratto, et al., 1994). Right wing authoritarianism is characterized by a willingness to submit to authority (Altemeyer, 1981). Both of these ideologies resemble agency motives in their concern over status and superiority, and thus offer support for the prediction that agency may be positively related to prejudice. Another factor that predicts prejudice is low empathy (Bäckström & Björklund, 2007) and a core facet of both empathy and communion is compassion (McFarland, 2010; Trapnell & Paulhus, 2012). In fact, individuals high in compassionate love have more positive attitudes towards out-groups and are less likely to discriminate against

immigrants (Sinclair, Fehr, Wang, & Regehr, 2015). These past findings suggest that low communion may also predict prejudice. The combination of high agency and low communion may therefore be particularly likely to fuel prejudice because individuals are focused on “getting ahead,” without much concern for “getting along.” Although these findings support our predictions, there is no work directly examining the interaction between agency and communion in predicting prejudice. Identifying agency and communion as an organizing principle for known predictors of prejudice would help to extend this work by allowing a more parsimonious theoretical explanation.

In a study measuring naturalistic social comparison tendencies, Locke and Nekich (2000) found that agency predicted more frequent downward social comparisons. This evidence suggests that agency may motivate more downward comparisons in general. However, it is possible that agency may be even more likely to motivate downward comparisons towards specific out-groups, resulting in prejudice. Realistic Group Conflict Theory (Campbell, 1965; Sherif, 1966) provides some evidence as to why agency may be particularly likely to motivate prejudice as it suggests that competition for resources among groups is a primary determinant of prejudice. Integrated Threat Theory (Stephan & Stephan, 2000), elaborates on sources of competition by explicitly distinguishing between symbolic and realistic threats. Realistic threat subsumes competition for physical resources, as it encompasses threats to the welfare of the in-group or its members (Stephan, Ybarra, & Bachman, 1999). On the other hand, symbolic threat is comprised of threats to the in-groups’ world views (Stephan, Ybarra, & Bachman, 1999). The circumstances under which individuals perceive threat or competition, and thus react to it via prejudice may vary as a function of their motives for agency and communion.

Motives for agency, aptly summarized by the “getting ahead” mentality, fall perfectly in line with this reasoning. If perceived threat and thus competition exists, in order to “get ahead” the appropriate response may be to limit the resources of other groups. This echoes the aforementioned similarity between agency motives and social dominance orientation, where in-group superiority is desired and thus an unequal allocation of resources preferred (Pratto et al., 1994). In fact, competition, ambition, power, status, and superiority, are all aspects of agency which lay in stark contrast to aspects of communion including looking out for others, altruism, compassion, and equality (Spence, Helmreich, Holahan, & Carole, 1979; Trapnell & Paulhus, 2012; Gebauer, Paulhus, & Neberich, 2013). Motives for communion, or “getting along”, may necessitate feeling less threatened in general or elicit a different reaction to these feelings of threat. The current research will hopefully shed some light on these possibilities as we aim to explore how these interpersonal motives interact to predict prejudice both at a dispositional level and as a function of real and perceived threat. The roles of agency and communion in prejudice may be particularly prominent when considering prejudice towards immigrants, as past research demonstrates attitudes towards immigrants specifically are largely due to perceived competition for resources (Esses, Jackson, & Armstrong, 1998).

Although past research offers support for our predictions about the relations between agency, communion and prejudice, they have not yet been tested directly. The research outlined above offers interesting insight into how personality and beliefs may relate to prejudice but some questions remain to be answered. Although categorization and competition may facilitate conflict between groups and thus prejudiced attitudes, it is unclear what motivates these competitive mindsets in the first place. As agency and communion are fundamental motives, testing our predictions may provide further insight into the basic motives underlying prejudice.

The Current Research

The main objective of the current research is to examine the relations of agency and communion, as both individual differences and motives, to prejudice. In Study 1, we will investigate whether individual differences in agency and communion interact to influence prejudice. In Study 2, we propose to test the causality of our predictions by manipulating agency and communion motives. In Study 3, we again manipulate agency and communion motives as well as self-threat to determine whether agency and communion particularly influence prejudice when positive self-views are threatened (consistent with prejudice serving as self-enhancement function). With these studies, we aim to test the hypotheses that (1) agency positively predicts prejudice, (2) communion moderates the effect of agency on prejudice such that agency positively predicts prejudice for those low in communion but not for those high in communion, and (3) self-threat will amplify this effect such that those high in agency and low in communion will exhibit more prejudiced attitudes when their positive self-views are threatened relative to when they are not.

Study 1

We begin by examining how individual differences in interpersonal motives for agency and communion relate to prejudiced attitudes and authoritarian ideologies. In this initial study we included multiple self-report measures of agency and communion encompassing values and traits, in order to get a representative depiction of participants' agentic and communal dispositions. In addition to this, participants completed measures of individual differences related to positive self-evaluations, including self-esteem, narcissism, and communal narcissism. We included these measures because past research suggests that inflated self-evaluations, specifically

narcissism, are related to prejudiced attitudes and authoritarian ideologies (e.g. Hodson et al., 2009). Finally, participants completed measures of prejudiced attitudes and authoritarian ideologies. We expected that agency would be positively related to both prejudiced attitudes and authoritarian ideologies strongly for those low in communion but not those high in communion.

Method

Participants

One hundred and forty undergraduate students were recruited from Wilfrid Laurier University's psychology participant pool to participate in the study in exchange for partial course credit (67% White/European, 99 female, $M_{\text{age}} = 19.67$, $SD = 5.45$).

We examined ethnicity and gender differences due to our sample being largely White/European and female. Ethnicity did not account for significant variability in our variables of interest, and therefore we do not include ethnicity in our reported results. We did find a significant main effect of gender, such that females reported lower overall prejudiced attitudes than males. However, there were no interactions with gender and any of our variables of interest and the main effect did not change the pattern or significance of our results; therefore we also did not include gender in our reported results.

Procedure & Materials

The study was advertised as "Examining Personality, Feelings, & Attitudes." Participants completed the study online. Participants were told they would be asked to fill out questionnaires measuring personality variables, feelings, and attitudes along with providing demographic information. See Appendix A for Study 1 materials.

Agency and Communion. Participants first completed the Extended Version of the Personality Attributes Questionnaire (EPAQ; Spence, Helmreich, Holahan, & Carole, 1979). The EPAQ is a 24-item measure that asks participants to select where they fall on a scale of one to five between a pair of contradictory characteristics that represent two extremes, one of which reflects the construct being measured. The measure consists of three eight-item subscales measuring agency (e.g., “not at all independent – very independent”; $\alpha = .70$), communion (e.g., “not at all kind – very kind” $\alpha = .78$), and unmitigated agency (e.g., “not at all hostile – very hostile”; $\alpha = .74$). The items for each subscale are summed separately, with higher scores indicating higher levels of the corresponding trait.

Participants then completed the Agentic and Communal Values Scale (ACV; Trapnell & Paulhus, 2012). The ACV asks participants to rate the relative importance of 24 different values on a scale from 1 (*not important to me*) to 9 (*highly important to me*). Participants are instructed to first familiarize themselves with all of the values and then rate each value as “a guiding principle in my life.” They are also instructed to work fairly quickly and spread out their ratings as much as possible. Twelve of the items reflect agentic values (e.g., “ambition [high aspirations, seizing opportunities]; $\alpha = .86$) and 12 of the items reflect communal values (e.g., “altruism [helping others in need]”; $\alpha = .87$). The items of each subscale were averaged separately, with higher scores indicating higher levels of the corresponding value.

Finally, participants completed a measure of agentic and communal traits (ACT; Gebauer et al., 2013). This agency-communion scale consists of 20-items reflecting agentic and communal traits. Participants were asked to rate how well each of the traits generally described them on a scale from one (*not at all*) to seven (*very much*). There were 10 agency items (e.g., “competitive”; $\alpha = .80$) and 10 communion items (e.g., “affectionate”; $\alpha = .82$). The items of

each subscale were averaged separately, with higher scores indicating higher levels of the corresponding trait.

Narcissism. Participants completed the Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988). The NPI consists of 40 pairs of statements ($\alpha = .86$), one reflecting a more narcissistic option (e.g., “I am an extraordinary person”) than the other (“I am much like everybody else”). Participants are asked to select the option they identified with most. The number of narcissistic choices is summed as a measure of narcissism, with higher scores indicating higher levels of narcissism.

Communal Narcissism. Participants completed the Communal Narcissism Inventory (CNI; Gebauer, Sedikides, Verplanken, & Maio, 2012). The CNI is a 16-item scale that asks participants the extent to which they agree with a variety of self-thoughts (e.g., “I am going to bring peace and justice to the world”; $\alpha = .90$) on a scale from 1 (*disagree strongly*) to 7 (*agree strongly*). Items were averaged, with higher scores indicating higher communal narcissism.

Self-Esteem. Participants completed the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965). The RSES is a 10-item scale that asks participants to rate from 1 (*very strongly disagree*) to 9 (*very strongly agree*) the extent to which they agree or disagree that statements describe themselves (e.g., “I feel that I am a person of worth, at least on an equal basis with others”; $\alpha = .88$). Items were averaged, with higher scores indicating higher self-esteem.

Authoritarian Ideologies. Participants first completed the Social Dominance Orientation measure (SDO; Pratto et al., 1994). The SDO is a 16-item measure that asks participants to indicate their agreement from 1 (*do not agree at all*) to 7 (*strongly agree*) with statements

reflecting social dominance orientation (e.g., “some groups of people are just more worthy than others”; $\alpha = .91$). Items were averaged, with higher scores indicating higher social dominance orientation.

Participants then completed the Right Wing Authoritarianism Scale (RWA; Altemeyer, 1981). The RWA is a 24-item measure that asks participants to indicate their agreement on a scale of 1 (*disagree strongly*) to 6 (*agree strongly*) with statements reflecting right wing authoritarianism (e.g., “Our customs and national heritage are the things that have made us great, and certain people should be made to show greater respect for them”; $\alpha = .70$). Items were averaged, with higher scores indicating higher right wing authoritarianism.

Prejudiced Attitudes. Participants completed the Intergroup Threat scale (IT; Avery, Bird, Johnstone, Sullivan, & Thalhammar, 1992). Participants were asked to rank on a scale from 1 to 5 where immigrants fell on pairs of polar adjectives (e.g. “safe – dangerous”; $\alpha = .91$). Items were averaged, with higher scores indicating higher prejudiced attitudes.

Participants then completed the Modern Racism Scale (MRS; McConahay, Hardee, & Batts, 1981). Participants completed an adapted 7-item version of the MRS (Hodson et al., 2009) that asks them to indicate their agreement from 0 (*strongly disagree*) to 4 (*strongly agree*) with statements about immigrants in Canada (e.g., “immigrants are getting too demanding in their push for equal rights”; $\alpha = .80$). Items were averaged, with higher scores indicating higher modern racism.

Results

Correlations

Table 1 presents descriptive statistics and correlations for all of the measures included in Study 1. We did not find any significant relations between self-esteem or communal narcissism and prejudiced attitudes or authoritarian ideologies. We did find that unmitigated agency and narcissism were significantly positively correlated with authoritarian ideologies. However, controlling for these variables did not change the significance or patterns of any reported results and therefore they are not included in further analyses.

Factor Analyses

We conducted exploratory factor analyses to determine whether we combine measures of agency, communion, authoritarian ideologies, and prejudiced attitudes (respectively) in our main analyses.¹ We expected that our combined agency and communion measures would have a two-factor solution such that the agency subscales load on one factor and communion subscales would load on another factor. We also expected that our combined prejudice and authoritarian ideologies measures would have a two-factor solution such that RWA and SDO would load on one factor and the MRS and IT would load on another factor.

Agency and Communion. In our first factor analysis, we included each of the separate agency and communion subscales from our EPAQ, ACV, and ACT measures. A two-factor principal components solution with varimax rotation accounted for 74.15% of the variance. The agency subscales loaded strongly on the first factor ($EPAQ_{Agency} = .78$; $ACV_{Agency} = .85$; $ACT_{Agency} = .91$) and weakly on the second factor ($EPAQ_{Agency} = .12$; $ACV_{Agency} = .05$; $ACT_{Agency} = .05$). The communion subscales loaded strongly on the second factor ($EPAQ_{Communion} = .84$; $ACV_{Communion} = .74$; $ACT_{Communion} = .92$) and weakly on the first factor

¹ Moderated multiple regressions were also conducted using each of the separate subscales predicting each of the separate prejudice and predictors of prejudice measures. All of the patterns observed were either similar to those reported in the overall analyses or not significant.

($EPAQ_{Communion} = -.12$; $ACV_{Communion} = .39$; $ACT_{Communion} = .11$). Therefore, each of the agency subscales was standardized and then averaged to create a single index of agency ($\alpha = .90$). The same was done for our communion subscales to create a single index of communion ($\alpha = .87$).

Authoritarian Ideologies and Prejudiced Attitudes. In our second factor analysis, we included the RWA, SDO, MRS, and IT measures. A two-factor principal components solution with varimax rotation accounted for 71.84% of the variance. RWA and SDO loaded strongly on the first factor (SDO = .90; RWA = .71) and weakly on the second factor (SDO = .06; RWA = .39). MRS and IT loaded strongly on the second factor (MRS = .71; IT = .88) and weakly on the first factor (MRS = .34; IT = .07). Therefore, the SDO and RWA measures were standardized and then averaged to create a single index of authoritarian ideologies ($\alpha = .88$). The same was done for our MRS and IT measures to create our overall measure of prejudiced attitudes in all reported analyses ($\alpha = .85$).

Moderated Multiple Regression Analyses

We expected communion to moderate the relation between agency and prejudice, such that agency would be positively related to prejudiced attitudes for people low in communion but not for those high in communion. To test this prediction, we conducted moderated multiple regression analyses predicting authoritarian ideologies and prejudiced attitudes (separately) from agency and communion. The predictors were mean-centered before computing interaction terms (Aiken & West, 1991). The regressions were conducted hierarchically such that agency and communion were entered in the first step and the interaction between agency and communion was entered in the second step. In all reported analyses high and low agency and communion correspond to values one standard deviation above and below the mean of agency and communion respectively (Aiken & West, 1991).

Authoritarian Ideologies. The overall regression model was significant, $F(3,134) = 5.03, p = .002, R^2 = .10$, and there was a significant interaction between agency and communion in predicting authoritarian ideologies, $B = .20, t(134) = 2.07, p = .041$ (see Table 2 and Figure 1). Follow-up analyses probing the two-way interaction (Aiken & West, 1991) revealed that there is a significant positive relation between agency and authoritarian ideologies for those high in communion, $B = .38, t(134) = 3.03, p = .003$. For those low in communion there is no significant relation, $B = .01, t(134) = .05, p = .957$. Furthermore, there is a significant negative relation between communion and authoritarian ideologies for those low in agency, $B = -.34, t(134) = -2.55, p = .012$. For those high in agency there is no significant relation, $B = .03, t(134) = .19, p = .853$. These results do not completely support our initial hypotheses, as communion did not mitigate the relationship between agency and authoritarian ideologies in the manner we predicted. However, it seems as though either high agency or low communion relate to more authoritarian ideologies. Somewhat consistent with our predictions, at low levels of agency, communion was negatively related to authoritarian ideologies, such that those higher in communion reported less endorsement of authoritarian ideologies.

Prejudiced Attitudes. Although the overall regression model was not significant, $F(3, 132) = 2.06, p = .108, R^2 = .05$, there was a marginally significant interaction between agency and communion in predicting prejudiced attitudes, $B = .20, t(132) = 1.95, p = .054$ (see Table 3 and Figure 2). Follow-up analyses probing the two-way interaction (Aiken & West, 1991) revealed that there are no significant differences in the relation between agency and prejudiced attitudes at either low communion, $B = -.19, t(132) = -1.31, p = .193$, or high communion, $B = .14, t(132) = 1.14, p = .256$. However for those low in agency there was a marginally significant negative relation between communion and prejudiced attitudes, $B = -.24, t(132) = -1.91, p =$

.058. For those high in agency there is no significant relation, $B = .10$, $t(132) = .67$, $p = .501$.

Although these results do not completely support our hypotheses, they are similar to the authoritarian ideologies results, such that high agency or low communion appears to be related to individual differences in prejudiced attitudes. Furthermore, high communion and low agency again predicted particularly low levels of prejudiced attitudes.

Discussion

Although the results of Study 1 did not entirely support our predictions, they do offer some interesting insight into how agency and communion may interact to influence both prejudiced attitudes and authoritarian ideologies. Overall we observed that high communion paired with low agency was associated with low endorsement of both authoritarian ideologies and prejudiced attitudes. We did not find evidence to support our hypotheses that communion mitigates the effects of agency, as high agency was associated with authoritarian ideologies and prejudice regardless of communion levels. Interestingly, low communion was also associated with authoritarian ideologies regardless of agency levels. In this way, it may be the case that either high agency or low communion can motivate prejudice.

Study 2

In Study 1, we measured individual differences in agency and communion. To further examine the role of agency and communion motives in Study 2, we attempted to manipulate these motives. To do so, we attempted to manipulate beliefs about the benefits of agency and communion in such a way that they might affect agentic and communal motives. We focused on only two combinations of agency and communion in order to encourage or discourage zero-sum beliefs and a focus on competition. Specifically, we attempted to persuade participants that a combination of high agency and low communion promotes success or that a combination of high

agency and high communion promotes success. (We felt that it would be implausible that low agency promotes success, so we did not manipulate agency and communion in a fully-factorial design.) These two combinations reflect zero-sum versus non zero-sum beliefs. Zero-sum beliefs assume that success for one person comes at the expense of others, a situation in which an emphasis on agency instead of communion could promote success. In contrast, non zero-sum beliefs do not assume that success for one person detracts from others, consistent with a situation in which a combination of agency and communion may be most conducive to success (Messick, 1967). Put differently, zero-sum beliefs regarding agency and communion would suggest that agentic motives and behaviours are beneficial whereas communal motives and behaviours could interfere with success, priming a competition mindset. In contrast, non zero-sum beliefs would suggest that both agentic and communal motives are beneficial, priming a co-operation mindset. Therefore, in our manipulations we framed agency and communion motives, defined as “getting ahead” and “getting along” respectively, as being either compatible or incompatible, reflecting either a zero-sum or non-zero-sum situation. Framing agency, which includes competition motives, and communion in a zero-sum manner could increase prejudiced attitudes. Consistent with this prediction, past research suggests that perceived zero-sum competition between groups is related to negative attitudes towards immigrants (Esses, Dovidio, Jackson, & Armstrong, 2001). We, however, examine the effect of zero-sum beliefs at a more general level, to see whether more fundamental motives affect prejudice. Framing agency and communion in a non zero-sum manner may work to reduce prejudice through an increased focus on co-operation, consistent with past research suggesting that reminding people of things they value beyond their own self-interests effectively reduces self-enhancement (Crocker et al., 2008; Burson et al., 2012).

Study 1 asked participants about their attitudes towards immigrants to Canada. In Study 2 we wanted to make the context more relevant, so we decided to focus on attitudes towards Syrian refugees. Syrian refugees had been in the national news frequently at the time; specifically, the Canadian government promised to bring in 250, 000 government sponsored refugees into Canada in a very short time span. Due to the widespread media coverage on this specific subgroup of refugees we adapted all the prejudiced attitude measures to refer to Syrian refugees in Study 2. In addition, we added measures of a number of constructs that have been suggested to be precursors of prejudiced attitudes (i.e., perceptions of realistic threat, symbolic threat, intergroup anxiety and stereotypes), adapted to refer to Syrian refugees (Stephan, Ybarra & Bachman, 1985). As expected, in Study 1 we did find similar patterns among both authoritarian ideologies and prejudiced attitudes. Therefore, moving forward we chose to incorporate different precursors of prejudice to extend our findings. SDO and RWA are conceptualized as stable individual differences and so may be less amenable to experimental manipulation; instead we focused on precursors that might more readily vary with changed beliefs about agency and communion. We chose to include measures of threat and anxiety to see whether these variables also had a similar relation to agency and communion as prejudiced attitudes.

The measures of threat and anxiety include measures of realistic threat, symbolic threat, and intergroup anxiety. Realistic threats pertain to threats to the existence, power, and welfare of the in-group (Stephan et al., 1999). Symbolic threats concern threats to the worldview of the in-group including morals, norms, attitudes, and beliefs (Stephan et al., 1999). Finally, intergroup anxiety is the extent to which someone feels personally threatened when interacting with out-group members (Stephan & Stephan, 1985). Additionally, instead of using the MRS and IT scales to measure prejudiced attitudes we included a single measure of prejudiced attitudes, the

Prejudicial Attitudes Survey (Stephan & Stephan, 1993), which mirrored the content of the IT scale but provided more items.

As no direct self-threat is being employed in this study, a self-esteem increase following the derogation of out-groups may not be expected. However, since perceived threat has been predictive of prejudiced attitudes towards immigrants in past research (Stephan, Ybarra & Bachman, 1985) we were interested in examining whether any self-esteem increase occurs following derogation of out-groups. To this end, we also included pre- and post-manipulation measures of state self-esteem, to determine whether exhibiting prejudiced attitudes would lead to a self-esteem increase even without the inclusion of a self-threat.

In Study 2 we attempt to manipulate participants' beliefs about agency and communion. Participants completed pre-test measures of agency, communion, narcissism, and self-esteem to determine the effectiveness of our manipulation. Participants also completed pre- and post-manipulation measures of state self-esteem to determine whether increases in self-esteem occur after exhibiting prejudiced attitudes. Lay beliefs about agency and communion were manipulated by randomly assigning participants to one of three conditions: competition (i.e., high agency and low communion promote success), co-operation (i.e., high agency and high communion promote success), or control. Participants then completed measures of agency, communion, general zero-sum beliefs, and lay beliefs about narcissism, included as manipulation checks. General zero-sum beliefs capture the extent to which participants believe that success for one person comes at the expense of others (Messick, 1967; Crocker & Canevello, 2008). Narcissism lay beliefs measure the extent to which participants believe that narcissism and associated qualities such as vanity and egotism are beneficial to achieving success (Jordan & Giacomin, unpublished). Both of these sets of beliefs encompass self-interested motives as beneficial for success and thus

reflect the mindset we are attempting to induce for participants in the competition condition. In addition to a prejudiced attitudes measure we expanded upon our first study by including measures of realistic threat, symbolic threat, and intergroup anxiety. To bolster our cover story and divert attention from our interest in prejudice, we also included items about attitudes toward the Canadian Government, paralleling the prejudiced attitudes measures.

We expect that the competition condition will increase agency, unmitigated agency, zero-sum beliefs, and narcissism lay beliefs relative to the cooperation condition. If our manipulation is effective in achieving this result, we expect participants in the competition condition to exhibit more prejudiced attitudes, realistic threat, symbolic threat, and intergroup anxiety than those in the co-operation condition. The control condition was included to determine whether the competition condition increases prejudice or the co-operation condition decreases prejudice relative to participants' baseline.

Method

Participants

Based on previous literature (e.g. Sibley & Duckitt, 2008), we expected our studies to generate a small to medium effect size. Therefore, we conducted power analyses using G*Power 3.1 (Faul, Erdfelder, Buchner, & Lang, 2009) to determine what sample size we would require. Our power analyses determined that a medium effect size would require a total sample size of 158 whereas a small effect size would require a total sample size of 967. In order to balance practical and power concerns we decided to test at least a medium effect size and collect a total sample size of at least 210. This sample size allows for 70 participants per condition, and allows for the flexibility to test for interactions.

Two hundred and twenty three undergraduate students were recruited from Wilfrid Laurier University's psychology participant pool to participate in the study in exchange for partial course credit (74% White/European, 170 females, $M_{\text{age}} = 19.60$, $SD = 2.19$).

We examined ethnicity and gender differences due to our sample being largely White/European and female. Ethnicity did not account for significant variance in our variables of interest, and therefore we do not include ethnicity in our reported results. Gender also did not account for significant variance in our variables of interest, and therefore it is also not included in our reported results.

Procedure & Materials

The study was advertised as "Media Modes and Reactions to News Articles." Participants completed the study online. Participants were told they would be asked to read a couple of different current news articles on various topics and then answer questions about the content of the articles and their reactions to them, along with answering some additional questions about themselves and providing demographic information. See Appendix B for Study 2 materials.

Pre-Test Survey. Participants first completed the 24-item EPAQ (Spence et al., 1979), measuring agency ($\alpha = .79$), communion ($\alpha = .84$), and unmitigated agency ($\alpha = .76$) during a pre-test survey that is an optional part of the psychology participant pool. They also completed this measure during the study as a manipulation check after reading their assigned manipulation article. Participants also completed the 40-item NPI ($\alpha = .83$; Raskin & Terry, 1988) and the 10-item RSES ($\alpha = .91$; Rosenberg, 1965) during the pre-test survey.

State Self-Esteem. During the study, participants completed the RSES (Rosenberg, 1965) adapted to include state instructions asking participants to respond according to how they

feel “right now” as both a pre-measure at the beginning of the study ($\alpha = .93$) and a post-measure ($\alpha = .93$) at the end of the study.

Cooperation and competition manipulation. Participants were randomly assigned to one of three conditions: (1) competition, (2) co-operation, or (3) control, via Qualtrics online survey platform’s randomizer. In their assigned condition they read a *Psychology Today* formatted article corresponding to their condition, discussing what mindset is best suited for success in the workplace as well as in relationships and for overall well-being (Appendix A). In the competition condition, participants read an article entitled “‘Getting Ahead’ instead of ‘Getting Along’: Why Nice Guys Finish Last”, which asserted a zero-sum view in which agentic motives are beneficial whereas communal motives are detrimental. In the co-operation condition, participants read an article entitled “‘Getting Ahead’ while ‘Getting Along’: Why Nice Guys Finish First”, which asserted a non-zero-sum view in which agentic and communal motives promote success most when utilized together. In the control condition, participants read an unrelated but similarly formatted *Psychology Today* article entitled “Patients with Misphonia Require Interventions and Treatment.” This article is similar in format to the manipulation articles in that it discusses a topic, misphonia (i.e., aversive reactions to certain sounds), and offers potential solutions and treatments for the described condition. After reading their assigned article, participants completed some attention check items asking them to summarize the content of the article and to indicate whether statements are true or false based on the content of the article they read. Participants then completed the agency ($\alpha = .75$), communion ($\alpha = .78$), and unmitigated agency ($\alpha = .78$) subscales from the 24-item EPAQ (Spence et al., 1979).

Zero-Sum Beliefs. Participants then completed a 6-item zero-sum beliefs measure (ZSB; Crocker & Canevello, 2008). This measure asks participants to rate the extent to which they

agree with items that represent zero-sum beliefs from 1 (*strongly disagree*) to 7 (*strongly agree*) (e.g., “One person’s success depends on another person’s failure”; $\alpha = .79$).

Narcissism Lay Beliefs. Participants also completed the 14-item Narcissism Lay Beliefs Scale (NLB; Jordan & Giacomin, unpublished), which asks participants to rate the extent to which they agree from 1 (*strongly disagree*) to 9 (*strongly agree*) with a variety of statements that reflect the notion that narcissism and associated qualities such as egotism and vanity, are positive and beneficial for success (e.g., “You need to be self-centered to get ahead in life”; $\alpha = .89$).

Syrian Refugee Article. Participants then read a relatively neutral article briefly outlining the Syrian refugee crisis and how it pertains to Canada. This article should further bolster the cover story that the study is examining reactions to news articles and at the same time inform participants about the out-group we are measuring prejudice towards. The article mainly focuses on the steps the Canadian government is taking to bring Syrian refugees to Canada. After reading the article, participants completed attention check items asking them to summarize the content of the article and to indicate whether statements are true or false based on the content of the article.

Political Beliefs. Participants then completed measures about their attitudes towards the Canadian Government. The first 5 items asked participants the extent to which they agreed from 1 (*strongly disagree*) to 9 (*strongly agree*) with statements about the current federal government (e.g., “The recent shift from a Conservative federal government to a Liberal federal government is a positive change for Canada”, $\alpha = .86$). The next 12-items mimic the Prejudicial Attitudes Survey items (Stephan & Stephan, 1993) outlined in the following section, asking participants to

indicate how they feel about the Liberal government on evaluative and emotional reactions on a scale from 0 (no [e.g., hatred] at all) to 9 (extreme [e.g., hatred]).

Prejudiced Attitudes. Participants completed the Prejudicial Attitudes Survey (Stephan & Stephan, 1993), indicating the extent to which they feel 12 emotional and evaluative reactions on a scale from 0 (*no* [e.g., approval] *at all*) to 9 (*extreme* [approval]; $\alpha = .92$) about Syrian refugees. This and all of the following measures were adapted to refer to Syrian refugees as the out-group.

Symbolic Threat. Participants then completed the 7-item Symbolic Threat Questionnaire (Stephan et al., 1999). Participants indicated the extent to which they agree from 1 (*strongly disagree*) to 10 (*strongly agree*) with a variety of statements representing perceived symbolic threats (e.g., “Syrian refugees should learn to conform to the rules and norms of Canadian society as soon as possible after they arrive”; $\alpha = .74$).

Realistic Threat. Participants completed the 8-item Realistic Threat Questionnaire (Stephan et al., 1999). Participants indicated the extent to which they agree from 1 (*strongly disagree*) to 10 (*strongly agree*) on a variety of statements representing perceived realistic threats (e.g., “Syrian refugees will increase the tax burden on Canadians”; $\alpha = .78$).

Intergroup Anxiety. Participants then completed the 12-item Intergroup Anxiety Scale (Stephan & Stephan, 1985). This scale asks participants to indicate on a scale from 1 (*not at all*) to 10 (*extremely*) how they would feel interacting with Syrian refugees (e.g., apprehensive; $\alpha = .93$).

Results

Correlations and Descriptive Statistics

Correlations and descriptive statistics for all of Study 2's variables are reported in Table 4. Notably, all of the EPAQ pre-test scores were strongly positively correlated with the corresponding EPAQ post-test scores (all $ps < .01$). Furthermore, replicating past research, prejudiced attitudes were strongly positively correlated with realistic threat, symbolic threat, and intergroup anxiety (all $ps < .01$).

Manipulation Checks

We expected that the competition condition would increase agency, unmitigated agency, zero-sum beliefs, and narcissism lay beliefs, and the co-operation condition would increase communion relative to the control condition. In order to test these predictions we conducted manipulation checks on each of our variables of interest. Our manipulation checks were conducted through one-way analyses of covariance. Pre-test measures of agency, communion, and unmitigated agency (EPAQ scores) were included as covariates as we tested whether there was a significant difference in post-manipulation scores for agency, communion, and unmitigated agency (EPAQ scores) as well as zero-sum beliefs (ZSB scores), and narcissism lay beliefs (NLB scores) between the competition, co-operation, and control conditions (see Table 5). Where appropriate, these tests were followed up with post-hoc LSD tests.

Our analyses revealed that there were no significant differences in EPAQ agency scores, $F(2, 215) = .97, p = .930$, between the competition ($M = 26.24, SD = 5.41$), co-operation ($M = 26.34, SD = 4.85$), and control ($M = 26.56, SD = 4.59$) conditions. There were no significant differences in EPAQ communion scores, $F(2, 216) = 1.13, p = .324$, between the competition ($M = 30.42, SD = 4.56$), co-operation ($M = 31.38, SD = 4.77$), and control ($M = 31.92, SD = 4.58$) conditions. There were also no significant differences in EPAQ unmitigated agency scores, $F(2, 216) = .91, p = .404$, between the competition ($M = 19.25, SD = 4.71$), co-operation ($M =$

18.29, $SD = 4.71$), and control ($M = 18.29$, $SD = 4.81$) conditions. There was, however, a significant difference across conditions in ZSB scores, $F(2, 217) = 3.70$, $p = .026$. Participants in the competition condition more highly endorsed zero-sum beliefs ($M = 3.76$, $SD = 1.05$) than those in the co-operation ($M = 3.27$, $SD = .96$) condition, $p = .007$. There were no significant differences in zero-sum beliefs between the control ($M = 3.50$, $SD = 1.16$) and the competition, $p = .170$, or co-operation condition, $p = .190$ (see Figure 3). There was a significant difference in NLB scores, $F(2, 217) = 5.76$, $p = .004$, such that participants in the competition condition endorsed narcissism lay beliefs more ($M = 5.05$, $SD = 1.22$) than those in the co-operation ($M = 4.37$, $SD = 1.12$), $p = .001$, and control ($M = 4.60$), $p = .029$, conditions (see Figure 4). There was no significant difference between the control condition and the co-operation condition, $p = .300$.

Moderated Multiple Regression Analyses

As our manipulation checks indicated the manipulation had some of the intended effects on zero-sum beliefs and narcissism lay beliefs, specifically that the competition condition reported the highest endorsement of both, we anticipated we would see differences in endorsement of prejudice measures across conditions. We expected those in the competition condition to exhibit higher prejudiced attitudes, realistic threat, symbolic threat, and intergroup anxiety than those in the co-operation and control condition. We also expected that those in the co-operation condition would exhibit lower prejudiced attitudes, realistic threat, symbolic threat, and intergroup anxiety than those in the competition and control condition. Since our manipulation did not have a significant effect on agency, communion, and unmitigated post-test scores, and we found the interaction between agency and communion to be significantly related to prejudice in Study 1, we included all of the EPAQ pre-test measures in each of the following models. We expected that there may be some interactions between pre-test EPAQ scores and

condition, such that dispositional agency, communion, and unmitigated agency may moderate the effect of the condition. Specifically, participants high in both agency and communion may be particularly hard to convince that only agency is a beneficial motive. In all further reported Study 2 analyses, the terms agency, communion, and unmitigated agency refer to the pre-test scores of these variables.

Univariate Analysis of Variance and Follow-Up Multiple Regression Analyses

We began our analyses by conducting univariate analyses of variance separately for each of our dependent variables. The models contained all of the main effects, including continuous predictors and interactions we were interested in testing, including condition, agency, communion, and unmitigated agency as well as associated interactions. The continuous predictors were mean-centered before computing interaction terms (Aiken & West, 1991). To decompose significant condition effects or interactions, we followed up these analyses with multiple regression analyses predicting each of our prejudiced variables (separately) from the variables that the general linear models indicated accounted for a significant proportion of variance.

Prejudiced Attitudes. The univariate analysis of variance indicated that there was an overall marginal main effect of communion, $F(1, 205) = 3.33, p = .070$. In order to determine the direction of this relationship, we followed this analysis with a moderated multiple regression utilizing effect coding (Aiken & West, 1991). These analyses confirmed that the overall model was significant, $F(12, 198) = 2.63, p = .003, R^2 = .14$. There was a marginally significant effect of communion, $\beta = -.05, t(198) = -1.88, p = .061$, such that being higher in communion was associated with less prejudiced attitudes, in line with Study 1 results. The univariate analysis of

variance had also indicated that there was a significant interaction between condition and unmitigated agency, $F(1, 205) = 3.07, p = .049$ (see Figure 5). Follow up analyses, testing differences at 1 *SD* below and above the mean of unmitigated agency, indicated that there were no significant condition effects for participants high, $F(2, 196) = .69, p = .504$, or low, $F(2, 196) = 2.41, p = .092$, in unmitigated agency. We then conducted moderated multiple regression analyses to determine whether the simple slopes within the condition were significantly different from zero. For these analyses, condition was dummy-coded, such that the condition being tested was coded as the comparison condition (Aiken & West, 1991). Within the competition condition, there was a positive relation between unmitigated agency and prejudiced attitudes, $\beta = .14, t(198) = 2.51, p = .013$. We found a similar result in the control condition, where high unmitigated agency was associated with higher prejudiced attitudes than low unmitigated agency, $\beta = .11, t(198) = 2.10, p = .037$. On the other hand, the slope in the co-operation condition did not significantly differ from zero, $\beta = -.04, t(198) = -.80, p = .427$, suggesting that within the co-operation condition the relation between unmitigated agency and prejudiced attitudes was attenuated.

Realistic Threat. The univariate analysis of variance indicated that there was a main effect of unmitigated agency, $F(1, 200) = 7.31, p = .007$. There was also a main effect of condition, $F(2, 200) = 4.33, p = .014$. There were no significant higher order interactions, therefore these were not included in further analyses. In order to determine the direction of the relation between unmitigated agency and realistic threat, we followed this analysis with a moderated multiple regression utilizing effect coding (Aiken & West, 1991). This analysis confirmed that the overall model was significant, $F(5, 209) = 5.19, p < .001, R^2 = .11$.

Furthermore, higher unmitigated agency was associated with higher reported realistic threat, $\beta =$

.06, $t(209) = 2.52, p = .012$. This is somewhat in line with our predictions, however rather than our manipulation influencing perceptions of realistic threat it is related to dispositional levels of unmitigated agency. In order to test differences across conditions, we conducted multiple regression analyses in which condition was dummy-coded, such that the condition being tested was coded as the comparison condition (Aiken & West, 1991). These analyses revealed that both the competition, $\beta = -.49, t(208) = -2.19, p = .030$, and co-operation condition, $\beta = -.61, t(208) = -2.78, p = .006$, reported lower realistic threat than the control condition. There was no significant difference between the competition condition and the co-operation condition, $\beta = .12, t(208) = .54, p = .590$. It is not clear why both the competition and co-operation conditions would be associated with reduced perceptions of realistic threat compared to the control condition, as we had predicted that the co-operation condition may reduce realistic threat whereas the competition condition may increase it. However it is possible that participants in the competition condition may have viewed refugees as relatively powerless and thus not particularly threatening to physical resources or the overall welfare of the in-group.

Symbolic Threat. The univariate analysis of variance indicated that there was a main effect of unmitigated agency, $F(1, 207) = 4.73, p = .031$. There was also a main effect of condition, $F(2, 207) = 3.00, p = .052$. There were no significant higher order interactions, therefore these were not included in further analyses. In order to determine the direction of the relation between unmitigated agency and realistic threat, we followed this analysis with a moderated multiple regression utilizing effect coding (Aiken & West, 1991). This analysis revealed that the overall model was marginally significant, $F(5, 216) = 2.14, p = .061, R^2 = .05$. Furthermore, higher unmitigated agency was associated with higher reported symbolic threat, $\beta = .05, t(216) = 2.07, p = .04$. In order to test differences across conditions, we conducted multiple

regression analyses where condition was dummy-coded, such that the condition being tested was coded as the comparison condition (Aiken & West, 1991). These analyses revealed that individuals in the competition condition reported significantly higher symbolic threat than those in the co-operation condition, $\beta = .48$, $t(216) = 2.38$, $p = .018$. Furthermore, individuals in the co-operation condition reported marginally lower symbolic threat than those in the control condition, $\beta = -.34$, $t(216) = -1.79$, $p = .090$. Finally, there was no significant difference between those in the competition condition and those in the control condition, $\beta = .14$, $t(216) = .67$, $p = .504$. We saw similar results with symbolic threat and unmitigated agency as we did with realistic threat, where higher unmitigated agency was associated with higher realistic threat. The results with symbolic threat and condition are more consistent with our predictions, with the co-operation condition reporting lower perceptions of symbolic threat and the competition condition reporting non-significantly higher perceptions of symbolic threat, relative to the control condition.

Intergroup Anxiety. The univariate analysis of variance indicated that there was a main effect of agency, $F(1, 197) = 3.98$, $p = .047$. There was also a main effect of unmitigated agency, $F(1, 197) = 9.34$, $p = .003$. In order to determine the direction of these relations, we followed this analysis with a moderated multiple regression utilizing effect coding (Aiken & West, 1991). This analysis confirmed that the overall model was marginally significant, $F(5, 206) = 4.28$, $p = .001$, $R^2 = .09$. Higher agency was associated with lower intergroup anxiety, $\beta = -.06$, $t(206) = -2.75$, $p = .007$. Conversely, higher unmitigated agency was associated with higher intergroup anxiety, $\beta = .09$, $t(206) = 2.75$, $p = .007$. We again see evidence that unmitigated agency plays a role in prejudice, as just like symbolic and realistic threat, higher unmitigated agency is related to higher reported intergroup anxiety. However, we would have predicted that agency would also increase

intergroup anxiety. This does not seem to be the case, and these results suggest key differences between unmitigated agency and agency.

Additional Analyses

Internal Analyses. Following our main analyses, we decided to conduct internal analyses further specifying the relation between our manipulation check measures and our dependent variables. Therefore, we conducted multiple regression analyses including zero-sum beliefs, narcissism lay beliefs, agency, communion, and unmitigated agency, predicting each of our dependent variables², separately. These analyses revealed that the overall model predicting prejudiced attitudes was significant, $F(5, 208) = 8.59, p < .001, R^2 = .17$ (see Table 10). Higher unmitigated agency predicted more negative attitudes towards Syrian refugees, $B = .12, t(208) = 4.06, p < .001$. There was no significant relation between zero-sum beliefs, narcissism lay beliefs, agency, or communion and prejudiced attitudes. The overall model predicting realistic threat was significant, $F(5, 212) = 5.18, p < .001, R^2 = .11$ (see Table 11). Higher unmitigated agency predicted higher realistic threat, perceptions that Syrian refugees are a threat to the welfare of Canadians, $B = .07, t(212) = 2.99, p = .003$. There was no significant relation between realistic threat and zero-sum beliefs, narcissism lay beliefs, agency, or communion. The overall model predicting symbolic threat was significant, $F(5, 212) = 4.58, p = .001, R^2 = .10$ (see Table 12). Higher unmitigated agency predicted higher reported symbolic threat, perceptions that Syrian refugees are a threat to Canadians' values and world views, $B = .05, t(212) = 2.24, p = .026$. Higher narcissism lay beliefs also predicted higher reported symbolic threat, $B = .27, t(212) = 2.78, p = .006$. Agency, communion, and zero-sum beliefs did not significantly predict

² We also conducted internal analyses including just our main predictors, agency and communion, and their interaction in the model, and did not find any significant interactions (all $ps > .20$).

symbolic threat. Finally, the overall model predicting intergroup anxiety was significant, $F(5, 213) = 8.10, p < .001, R^2 = .16$ (see Table 13). Higher unmitigated agency predicted greater intergroup anxiety, feeling anxious about interacting with Syrian refugees, $B = .09, t(213) = 3.14, p = .002$. Greater endorsement of narcissism lay beliefs also predicted feeling more anxious about interacting with Syrian refugees, $B = .28, t(213) = 2.28, p = .024$. There was no significant relation between intergroup anxiety and zero-sum beliefs, agency, or communion.

Self-Esteem. Due to past research indicating that prejudice may serve a self-enhancement function, we also tested whether an increase in self-esteem might occur after participants exhibited prejudice attitudes. Therefore, we conducted a hierarchical multiple regression in order to test this prediction with each of our prejudice measures, prejudiced attitudes, realistic threat, symbolic threat, and intergroup anxiety, predicting self-esteem at post-test. Controlling for pre-test levels of self-esteem, we did not find that any of the prejudice measures significantly predicted changes in self-esteem (see Table 14).

Discussion

Although our results do not clearly support our predictions, they do offer interesting insight into the relation between agency, communion, and prejudice. Firstly, even though we were able to effectively manipulate zero-sum beliefs and narcissism lay beliefs, we were not able to successfully manipulate agency, communion, or unmitigated agency. Nevertheless, because we manipulated zero-sum beliefs, we might still have expected to observe some of our predicted effects on prejudice. We predicted that those in the competition condition would exhibit the most prejudiced attitudes, whereas those in the co-operation condition would exhibit the least prejudiced attitudes. There was no main effect of condition, however the results suggest that

condition and thus zero-sum beliefs and narcissism lay beliefs, significantly interacted with dispositional levels of unmitigated agency. Specifically, within both the control and competition condition higher unmitigated agency was associated with more prejudiced attitudes. In contrast, this pattern was not evident in the co-operation condition. This pattern of results suggests that the co-operation condition attenuated the degree to which prejudiced attitudes were associated with unmitigated agency. We also saw a marginal main effect of communion, such that higher communion was associated with lower prejudiced attitudes, which is consistent with our predictions as well as the results of Study 1.

We predicted that participants in the co-operation condition would report lower perceptions of realistic threat than those in the control and competition conditions and that those in the competition condition would report the highest perceptions of realistic threat. Although we did find a main effect of condition on realistic threat, the results did not follow our predictions exactly. We found that both the competition and co-operation conditions reported lower perceptions of realistic threat than the control condition. This is a surprising result, however although this difference did not reach significance, the pattern of the results suggests that the co-operation condition reported lower perceptions of realistic threat than the competition condition which is more in line with what we would expect. There was also a main effect of unmitigated agency, such that higher in unmitigated agency was associated with higher perceptions of realistic threat. This is an informative result in light of the interaction we observed with unmitigated agency and the co-operation condition when predicting prejudiced attitudes. Whereas the co-operation condition attenuated the relation between prejudiced attitudes and unmitigated agency, we do not see that effect replicated with realistic threat. This suggests that

even though non-zero-sum beliefs may be effective in reducing prejudiced attitudes among those high in unmitigated agency, those same individuals may still feel threatened by out-groups.

The same main effect of unmitigated agency occurred with symbolic threat, such that higher unmitigated agency higher perceptions of symbolic threat. There was also a main effect of condition such that those in the competition condition reported higher perceptions of symbolic threat than those in the co-operation condition. This finding is in line with our predictions that the co-operation condition may reduce perceptions of realistic threat. Participants in the co-operation condition also reported marginally lower perceptions of symbolic threat than those in the control condition, lending more support to the prediction that cooperation may reduce prejudice. It is again interesting to note that whereas the main effect of unmitigated agency remained the same for both symbolic and realistic threat we observed different effects of condition on these outcomes. Due to the complex nature of prejudice, these differences among dependent variables may not be entirely surprising.

The intergroup anxiety results provide insight into the differences between agency and unmitigated agency. Whereas higher agency was associated with feeling less intergroup anxiety, higher in unmitigated agency was associated with higher levels of intergroup anxiety. Although this is not entirely in line with our predictions, past research suggests that unmitigated agency, not agency, is related to interpersonal problems (Helgeson & Fritz, 1999; Helegson & Fritz, 2000) and these contrasting patterns may be a result of these differences.

Our internal analyses also suggest that differences in unmitigated agency play a significant role in predicting prejudiced attitudes. Furthermore, we saw that beliefs about narcissistic qualities being positive and beneficial predicted reporting that Syrian refugees posed

a threat to the in-group's world views and feeling anxious about interacting with Syrian refugees. Interestingly, both of these variables require endorsing characteristics and traits such as narcissism, selfishness, hostility, and arrogance, which generally have a negative connotation. Although narcissism lay beliefs are intended to capture beliefs about narcissism rather than trait levels of narcissism, we examined whether such beliefs capture variability above and beyond scores on the Narcissistic Personality Inventory. For both symbolic threat and intergroup anxiety we found that narcissism was not a significant predictor ($p > .30$), although narcissism lay beliefs were. We did not find any significant results with our other manipulation check measures of agency, communion, and zero-sum beliefs.

Finally, we did not find evidence for our prediction that self-esteem may increase as a result of engaging in prejudiced behaviours. This is not entirely surprising as there was no direct self-threat involved in this study, and therefore there was little opportunity for prejudice to prevent the loss of self-esteem. This demonstrates the importance of Study 3, conducted concurrently with Study 2, in which we examine how a self-threat influences these relations. A direct self-threat may decrease self-esteem, and also increase the extent to which agency and communion affect prejudice, in order to preserve self-esteem, or a positive distinction between the in-group and out-group.

Study 3

In Study 3, which was run concurrently with Study 2, we challenged participants' positive self-views in order to directly examine prejudice in a context in which it could serve a self-enhancement or self-protection function. We expected that the addition of a self-threat will increase prejudice and discrimination, as seen in past research on defensive discrimination (Fein & Spencer, 1997; Jordan et al., 2005), and increase the likelihood that participants will exhibit

prejudiced attitudes, particularly in the competition condition. In addition to this, we expect the addition of a self-threat to increase perceived realistic threat, symbolic threat, and intergroup anxiety, particularly for participants in the competition condition.

Method

Participants

A power analyses conducted with G*Power 3.1 (Faul et al., 2009) determined that in order to detect a medium effect size we would require a total sample size of 211, whereas a small effect size would require a total sample size of 1289. Ideally, we planned to collect 420 participants, allowing for 70 per condition as with Study 2, and testing at least a medium effect size. Due to resource constraints, however, this number was not feasible to collect; therefore we ultimately collected data from 200 students (65% White European, 136 females, $M_{age} = 19.17$, $SD = 1.75$), recruited from Wilfrid Laurier University's psychology participant pool. Participants received partial course credit in exchange for their participation.

We examined ethnicity and gender differences due to our sample being largely White/European and female. We did find a significant main effect of ethnicity for prejudiced attitudes and realistic threat, and a marginally significant main effect for symbolic threat. White/European participants reported higher levels of these variables than non-White/European participants. There was no significant effect of ethnicity for intergroup anxiety. Furthermore, there were no significant interactions between ethnicity and any of our other variables of interest. Analyses including only White/European participants did not yield results that differed from those reported. Therefore ethnicity is not included in reported results. There was no significant effect of gender on prejudiced attitudes, realistic threat, or symbolic threat. We did find a significant main effect of gender on intergroup anxiety such that females reported higher overall

levels of intergroup anxiety than males. There were no significant interactions between gender and any of our other variables of interest and therefore gender was not included in reported analyses.

Procedure & Materials

The study was advertised as “Reactions to News Articles and Verbal Intelligence.” Participants completed the study in the lab on a computer in a private booth. Participants were told that the purpose of the study was to investigate reactions to current news articles and verbal intelligence. They were told they would read some current news articles and answer questions about the content of these articles and their reactions to them, as well as completing a verbal reasoning and intelligence test, receiving feedback on their performance, and filling out several personality questionnaires and providing demographic information.

Narcissism. Participants completed the 40-item NPI (Raskin & Terry, 1988; $\alpha = .74$).

Communal Narcissism. Participants completed the 16-item CNI (Gebauer et al., 2012; $\alpha = .91$).

Self-Esteem. Participants completed the 10-item RSES (Rosenberg, 1965; $\alpha = .89$).

Agency and Communion. Following the same procedure as Study 2, participants were randomly assigned, via Qualtrics online survey platform’s randomizer, to read one of three *Psychology Today* formatted articles (competition, co-operation, or control) which served as our manipulation of agency and communion and completed attention check items. Participants then completed the 24-item EPAQ (Spence et al., 1979), with each of its three subscales including agency ($\alpha = .71$), communion ($\alpha = .76$), and unmitigated agency ($\alpha = .73$).

Zero-Sum Beliefs. Participants completed the 6-item zero-sum beliefs measure (Crocker & Canevello, 2008; $\alpha = .75$).

Narcissism Lay Beliefs. Participants completed the 14-item NLB scale (Jordan & Giacomini, unpublished; $\alpha = .83$).

Self-Threat Manipulation. Participants then completed a computer-based task described as the Reasoning and Verbal Acuity Battery, an alleged measure of verbal intelligence (RVAB; Fein & Spencer, 1997). This task involves five multiple choice sections testing Analogies, Antonyms, Syllogisms, Verbal-Nonverbal Matching, and Synonyms. It is designed to be extremely difficult and enforces strict time limits, and has been used effectively in past research to temporarily challenge university students' self-views (Fein & Spencer, 1997; Jordan et al., 2005). Participants were randomly assigned to one of two conditions, threat or no threat, via Qualtrics online survey platform's randomizer. Participants in the threat condition received instructions stating that the RVAB is an effective measure and has been validated in numerous studies throughout the United States and Canada over the last five years. Participants in the no threat condition received instructions stating that new research suggests that the RVAB includes questions that are overly difficult for most populations and we will therefore be asking for their feedback at the end of the study. These participants were instructed to simply select the first option given for each question after reading the content. At the conclusion of the task, participants received feedback that they scored between the 32nd and 56th percentiles on each section. Participants in the threat condition should feel that this negative feedback is representative of their ability, whereas participants in the no threat condition will not.

Syrian Refugee Article. Following the same procedure as Study 2, participants read a relatively neutral article outlining the Syrian refugee crisis and how it pertains to Canada. After

reading the article, participants completed attention check items asking them to summarize the content of the article and to indicate whether statements are true or false based on the content of the article.

Political Beliefs. Participants completed measures of attitudes towards the Canadian Government ($\alpha = .85$).

Prejudiced Attitudes. Participants next completed the 12-item Prejudicial Attitudes Survey (Stephan & Stephan, 1993; $\alpha = .91$)

Symbolic Threat. Participants then completed the 7-item Symbolic Threat Questionnaire (Stephan et al., 1999; $\alpha = .71$).

Realistic Threat. Participants then completed the 8-item Symbolic Threat Questionnaire (Stephan et al., 1999; $\alpha = .81$).

Intergroup Anxiety. Participants then completed the 12-item Intergroup Anxiety Scale (Stephan & Stephan, 1985; $\alpha = .95$).

Results

Correlations and Descriptive Statistics

Correlations and descriptive statistics for all of Study 3's variables are reported in Table 15. Consistent with past research and Study 2, we found that prejudiced attitudes are strongly positively correlated with realistic threat, symbolic threat, and intergroup anxiety (all $ps < .01$).

Manipulation Checks

We again expected that the competition condition would increase agency, unmitigated agency, zero-sum beliefs, and narcissism lay beliefs relative to the control condition, and that the co-operation condition would increase communion. In order to test these predictions we

conducted manipulation checks on each of our variables of interest (see Table 16)³. Our manipulation checks were conducted through one-way analyses of variance. Where appropriate, these tests were followed up with post-hoc LSD tests.

Our analyses revealed that there were significant differences in EPAQ agency scores, $F(2, 196) = 4.02, p = .020$, between the three manipulation conditions (see Figure 6). Pairwise comparisons revealed that participants in the competition condition reported significantly higher agency scores ($M = 28.00, SD = 4.48$) than participants in the co-operation condition ($M = 25.90, SD = 4.86$), $p = .010$. There was no significant difference between the competition and control conditions ($M = 27.73, SD = 4.63$), $p = .741$. Finally, the co-operation condition reported lower agency scores than those in the control condition, $p = .024$.

There were no significant differences in EPAQ communion scores, $F(2, 197) = 1.09, p = .339$, between the competition ($M = 30.06, SD = 12.86$), co-operation ($M = 32.15, SD = 4.37$), and control ($M = 31.26, SD = 4.35$) conditions.

There was a marginally significant difference in EPAQ unmitigated agency scores between conditions, $F(2, 195) = 2.69, p = .070$ (see Figure 7). Pairwise comparisons revealed that participants in the competition condition ($M = 20.27, SD = 5.05$) reported significantly higher unmitigated agency scores than participants in the co-operation condition ($M = 18.49, SD = 4.00$), $p = .028$. There was no significant difference between the control condition ($M = 19.85, SD = 4.69$) and either the competition, $p = .607$, or co-operation condition, $p = .087$.

³ The reported analysis does not include feedback condition in the model as manipulation checks were administered before participants completed the feedback portion of the study. However, analyses including feedback and the interaction between feedback and article condition found no significant main effects or interactions ($ps > .10$)

We found that there was a significant difference across conditions in ZSB scores, $F(2, 197) = 18.37, p < .001$ (see Figure 8). Participants in the competition condition more highly endorsed zero-sum beliefs ($M = 4.19, SD = .88$) than those in the co-operation condition ($M = 3.17, SD = .87$), $p < .001$, and those in the control condition ($M = 3.68, SD = 1.12$), $p = .003$. Furthermore, participants in the control condition had higher ZSB scores than the co-operation condition, $p = .002$.

Finally, we found that there were significant differences in NLB scores, $F(2, 197) = 12.33, p < .001$ across manipulation conditions (see Figure 9). Participants in the competition condition endorsed narcissism lay beliefs more ($M = 5.27, SD = 1.05$) than those in the co-operation ($M = 4.32, SD = 1.01$), $p < .001$, and control conditions ($M = 4.79, SD = 1.23$), $p = .012$. Participants in the control condition, endorsed narcissism lay beliefs significantly more than participants in the cooperation condition, $p = .015$.

Univariate Analysis of Variance

As our manipulation checks indicated that the manipulation had some of the intended effects on zero-sum beliefs, narcissism lay beliefs, agency, and unmitigated agency, we anticipated that we may see differences in endorsement of prejudice measures across conditions. We expected that participants in the competition condition would exhibit higher levels of prejudiced attitudes, realistic threat, symbolic threat, and intergroup anxiety than those in the co-operation condition. The control condition will again allow us to determine whether any observed effects are due primarily to the effects of cooperation or competition. With the addition of the self-threat, we expect to see the differences between the competition and control groups amplified. Specifically, those in both the competition and threat condition, will exhibit higher

levels of prejudice, threat, and anxiety than those in the competition and no threat condition, and the highest levels of prejudice across all conditions.

We began our analyses by conducting a series of 2 (Feedback: threat, no-threat) x 3 (Manipulation: competition, co-operation, control) analyses of variance separately for each of our dependent variables (see Table 17).

Prejudiced Attitudes. The analysis of variance indicated that manipulation condition, feedback condition, and their interaction did not have a significant effect on prejudiced attitudes, all $F < 1, p > .40$.

Realistic Threat. The analysis of variance indicated that manipulation condition, feedback condition, or an interaction between the two factors did not have a significant effect on realistic threat, all $F < 1, p > .50$.

Symbolic Threat. The analysis of variance indicated that manipulation condition, feedback condition, or an interaction between the two factors did not have a significant effect on symbolic threat, all $F < 2, p > .20$.

Intergroup Anxiety. The analysis of variance indicated that there was a significant main effect of feedback condition on prejudiced attitudes, $F(1,176) = 4.84, p = .029, \eta_p^2 = .03$, such that participants in the threat condition reported more intergroup anxiety ($M = 4.26, SD = 1.78$) than participants in the no-threat condition ($M = 3.66, SD = 1.86$). This result does not fully support our hypotheses, as we expected to see an interaction between manipulation condition and feedback condition. We observed, in contrast, that participants experiencing the self-threat reported being more anxious about the idea of interacting with Syrian refugees overall than participants who did not experience the self-esteem threat.

Internal Analyses

Consistent with Study 2, we also conducted internal analyses including our manipulation check measures of agency, communion, unmitigated agency, zero sum beliefs, and narcissism lay beliefs in our model predicting our various dependent measures. Our manipulation checks for agency and unmitigated agency revealed that these did significantly differ across manipulation condition, but not across feedback condition. Communion did not significantly differ across conditions. Both zero sum beliefs and narcissism lay beliefs did differ across conditions as we would expect. As these measures were manipulation checks of the article conditions, we did not include article condition in these internal analyses. We included feedback condition in the model to account for any variance that it may explain, and tested for interactions between feedback and the other independent variables.

Prejudice Attitudes. The regression analysis indicated that the overall model was significant, $F(6, 188) = 2.92, p = .009, R^2 = .09$ (see Table 18). Both unmitigated agency, $\beta = .07, t(188) = 2.64, p = .009$, and narcissism lay beliefs, $\beta = .30, t(188) = 2.42, p = .017$, positively predicted prejudiced attitudes. Therefore, participants higher in unmitigated agency and participants that endorsed narcissistic qualities as beneficial expressed more negative feelings towards Syrian refugees than participants that were low in unmitigated agency and did not believe narcissistic qualities to be beneficial. Agency, communion, and zero-sum beliefs, and feedback condition did not significantly predict prejudiced attitudes.

Realistic Threat. The regression analysis indicated that the overall model was not significant, $F(6, 190) = .65, p = .694, R^2 = .02$ (see Table 19). Our analysis concluded that none of our independent variables significantly predicted perceptions that Syrian refugees are a threat to the welfare of their in-group, Canadians.

Symbolic Threat. The regression analysis indicated that the overall model was marginally significant, $F(6, 190) = 2.08, p = .057, R^2 = .06$ (see Table 20). Narcissism lay beliefs positively predicted symbolic threat, $\beta = .24, t(190) = 2.39, p = .018$. Thus, participants who believed narcissistic characteristics are beneficial also indicated that they believed Syrian refugees to be a threat to the in-group, Canadians', world views. Agency, communion, unmitigated agency, zero-sum beliefs, and feedback condition did not significantly predict symbolic threat.

Intergroup Anxiety. The regression analysis indicated that the overall model was significant, $F(6, 190) = 2.33, p = .034, R^2 = .07$ (see Table 21). Agency negatively predicted intergroup anxiety, $\beta = -.07, t(190) = -2.36, p = .020$, whereas narcissism lay beliefs positively predicted intergroup anxiety, albeit marginally, $\beta = .24, t(190) = 1.75, p = .082$. Therefore participants who reported higher levels of agency felt less personally threatened about interacting with Syrian refugees. In contrast, participants who indicated that narcissistic characteristics were beneficial reported feeling more personally threatened by interacting with Syrian refugees. Feedback condition marginally predicted intergroup anxiety, $\beta = .24, t(190) = 1.85, p = .066$, such that participants in the self-threat condition reported they felt more personally threatened about interacting with Syrian refugees, than those in the no self-threat condition. Unmitigated agency, communion, and zero-sum beliefs did not significantly predict intergroup anxiety.

Discussion

One important limitation to note with Study 3 is that our sample size was unfortunately smaller than we wanted, to have sufficient power to detect both small and medium effects, particularly when testing interactions. This is important to take into consideration when considering the results. Our manipulation checks indicated that our manipulation resulted in

many of our expected differences between conditions. Unlike Study 2, we did find some differences in agency and unmitigated agency across manipulation conditions in Study 3. Specifically, we found that participants in the competition condition reported higher agency than those in the co-operation condition. Additionally, participants in the co-operation condition reported lower agency scores than those in the control condition. There was no significant difference between the competition condition and control condition. These results suggest that reading the article suggesting that a balance of agency and communion is beneficial, the co-operation condition, led to lower agency scores overall. There were also differences in unmitigated agency scores. Specifically, participants in the competition condition reported higher unmitigated agency than participants in the co-operation condition. In this case, there were no significant differences between either the competition or co-operation and the control condition. Similar to Study 2, we did not find differences in communion scores between conditions. Replicating the results of Study 2, we found that participants in the competition condition more highly endorsed zero-sum beliefs than participants in the co-operation condition. Unlike Study 2, we also found that participants in the competition condition endorsed zero-sum beliefs more than participants in the control condition. Additionally, participants in the control condition endorsed zero-sum beliefs more than those in the co-operation condition. This suggests that the competition article had the effect of increasing zero-sum beliefs, whereas the cooperation condition reduced zero-sum beliefs. Finally, again similar to Study 2, we found that participants in the competition condition endorsed narcissism lay beliefs more readily than those in the co-operation and control conditions. Overall, in Study 3 we found more evidence for the expected group differences between our manipulation conditions.

Although our manipulation had the intended effect on agency, unmitigated agency, zero sum beliefs, and narcissism lay beliefs, we did not see the expected effects on our dependent variables when comparing across conditions. The current sample did not demonstrate any significant differences across prejudiced attitudes, symbolic threat, or realistic threat as a result of feedback or article condition. However, we did find that participants in the threat condition reported higher intergroup anxiety than participants in the no-threat condition. Intergroup anxiety is the extent to which someone feels personally threatened interacting with out-group members (Stephan & Stephan, 1985). In Study 3, the out-group was defined as Syrian refugees. It is interesting that we see this effect with intergroup anxiety which measures perceived personal threat, and not with symbolic or realistic threat measures that refer to threats to the in-group, defined in Study 3 as Canadians. This result could suggest that the nature of the threat being directed at the self, translated into feeling more personally threatened overall.

Our internal analysis did replicate some of the main effects reported in Study 2. Specifically, in both Study 2 and Study 3, narcissism lay beliefs significantly positively predicted symbolic threat and intergroup anxiety. In Study 3, narcissism lay beliefs also positively predicted prejudiced attitudes. Furthermore, we found that unmitigated agency positively predicted prejudiced attitudes in both Study 2 and 3, and agency negatively predicted intergroup anxiety in just Study 3.

General Discussion

Overall, the findings of Studies 1 to 3 did not consistently support our primary hypotheses, but they did offer some insight into how agency, communion and other lay beliefs may relate to prejudiced attitudes towards immigrants. We did not find consistent evidence that motives for agency and communion predict prejudiced attitudes. In Study 1, we found that both

high agency and low communion may motivate authoritarian ideologies and prejudiced attitudes. Furthermore, communion at low levels of agency was negatively associated with authoritarian ideologies and prejudiced attitudes. It is possible that we did not observe any attenuation of the association of high agency with prejudice by communion because agency may be a stronger motivating factor for attitudes towards out-groups than is communion. We did not, however, observe any consistent findings in Studies 2 or 3 to suggest that agency and communion were associated with prejudiced attitudes in the same way as in Study 1. We also did not find that agency and communion predicted realistic or symbolic threat. These inconsistencies in our findings across studies may be due to methodological differences between studies. Specifically, Studies 2 and 3 focused on manipulating beliefs about agency and communion rather than looking at dispositional levels of these variables as we did in Study 1. Additionally, Study 1 included more extensive indices of agency and communion. Therefore it is still plausible that agency and communion may influence prejudiced attitudes, but further research is needed to clarify this relation.

There was, however, evidence in Studies 2 and 3 that agency was negatively associated with intergroup anxiety. Intergroup anxiety is the extent to which someone feels personally threatened when interacting with out-group members (Stephan & Stephan, 1985) which in Studies 2 and 3 were Syrian refugees. Examining some of the specific items included in measures of agency and intergroup anxiety could help to clarify why this relation may exist. The agency subscale requires participants to report how self-confident, independent, superior, and able to stand up well under pressure they are. The intergroup anxiety measure asks participants to what extent they would feel uncertain, awkward, confident, and at ease when interacting with Syrian refugees. It is possible that highly agentic individuals' overall feelings of confidence and

competence would allow them to feel more comfortable across a variety of contexts, including when interacting with out-groups. We may have found similar results if we asked how participants would feel interacting with any other person.

The most consistent finding across studies was that unmitigated agency may be uniquely associated with prejudiced attitudes. In Study 1 we found that unmitigated agency was positively related to authoritarian ideologies; in Study 2 we found that it was positively related to realistic threat, symbolic threat, and intergroup anxiety; and in Studies 2 and 3 we found that it was consistently positively related to prejudiced attitudes. These findings extend past research suggesting that unmitigated agency is distinct from agency and communion and may be particularly associated with problematic interpersonal behaviours (Helgeson & Fritz, 1999; Helgeson & Fritz, 2000). However, it is important to consider that past research also suggests that individuals high in unmitigated agency have negative views of others in general (Helgeson & Fritz, 2000). We did find that unmitigated agency was positively associated with expressing negative views towards the Canadian Liberal government in Study 2 ($p = .018$), although this was not the case in Study 3 ($p = .692$). Furthermore, in both studies participants read an article outlining the Liberal government's plans to bring 250, 000 refugees to Canada. Thus, it is unclear whether negative feelings towards the Liberal government reflect the association between the Liberal government and Syrian refugees or reflect a general negative attitude towards others.

We also found that endorsement of narcissism lay beliefs was consistently related to greater perceptions of symbolic threat in both Studies 2 and 3. In Study 2 narcissism lay beliefs significantly predicted intergroup anxiety, whereas in Study 3 this relation was only marginally significant. In Study 3 narcissism lay beliefs also positively predicted prejudiced attitudes. These

findings persist even when controlling for narcissism as measured by the Narcissistic Personality Inventory. Therefore, believing that narcissistic attributes such as selfishness and arrogance are beneficial is consistently associated with perceptions of symbolic threat, although it is not entirely clear why these beliefs are related to symbolic threat in particular. Symbolic threat, in this context, involves believing that Syrian refugees have values that are dissimilar and incompatible with Canadian values and that Canadian culture would be undermined by Syrian refugees. One possible explanation is that individuals who endorse narcissism lay beliefs are reporting perceptions of symbolic threat as a less explicit way of derogating this out-group. Another possible explanation is that narcissistic qualities may be seen by those who value these qualities as reflecting individualism and therefore representative of Canada's individualistic culture. If Syrian refugees are not perceived as having these more individualistic ideals, individuals who value narcissism may see Syrian refugees as more distinct from Canadians than individuals who do not value narcissism. Consequently, they may feel more threatened by Syrian refugees. Another possibility is that individuals who endorse narcissism lay beliefs may believe that everyone, including Syrian refugees, endorse these individualistic ideals to a greater extent and therefore Syrian refugees will be motivated to push their own culture and beliefs ahead of Canadian culture. This may, again, be associated with greater feelings of threat. Further research investigating narcissism lay beliefs and how and why they are related to symbolic threat and other prejudice variables is needed in order to draw any firm conclusions.

We also consistently found that our manipulation of a focus on competition or cooperation was successful in changing both general zero-sum beliefs and lay beliefs about narcissism although its effects on agency and unmitigated agency were inconsistent across studies. Somewhat surprisingly, we did not find any differences in communion in Study 2 or 3.

The key difference between the competition and co-operation articles was the emphasis or lack of emphasis on communion as contributing to success, therefore we might have expected this variable to differ as a function of condition. The inconsistency in results with agency, communion, and unmitigated agency may be due to these variables being stable individual differences and thus difficult to manipulate. It is important to note that Study 2 was completed online whereas Study 3 was completed in-lab. The increased effectiveness of the article manipulation in Study 3 might suggest that participants were more engaged in-lab. The most consistent finding with these manipulations was that our competition condition which touted a zero-sum orientation for agency and communion (i.e., high agency and a lack of communion promotes success) increased both general zero-sum beliefs and positive narcissism lay beliefs. This finding suggests that believing that agency promotes success at the expense of communion leads to more general beliefs that one person's success depends on another person's failure and that qualities such as selfishness and arrogance are beneficial. However, the implications of these beliefs about agency and communion on prejudiced attitudes remain unclear as we found some results to support our hypotheses for these beliefs in Study 2 but not in Study 3.

In Study 2 we found that higher unmitigated agency was associated with more prejudiced attitudes in the competition and control condition but not in the co-operation condition. Thus, for prejudiced attitudes our manipulation had the intended effect for individuals high in unmitigated agency, such that a focus on co-operation, promoting a balance between agency and communion, reduced prejudiced attitudes. The co-operation article may work to reduce prejudice through affirming that communal values are important, consistent with past research suggesting that affirming communal values such as empathy and compassion effectively reduces self-enhancement more than affirming agentic values (Crocker et al., 2008). Therefore

encouraging a balance of agency and communion for individuals who normally exhibit a complete lack of communion may discourage self-enhancement through derogation of others and thus reduce prejudiced attitudes.

It is interesting to note that although the co-operation condition attenuated the positive relation between unmitigated agency and prejudiced attitudes, we did not see this pattern replicated for perceptions of realistic threat, symbolic threat, or intergroup anxiety in Study 2. In Study 2, higher unmitigated agency was positively associated with realistic threat, symbolic threat, and intergroup anxiety regardless of condition. These findings suggest that although high unmitigated agency participants with a co-operation mindset may be less likely to explicitly derogate out-groups they may still perceive out-groups as threatening. These findings were not replicated in Study 3, however.

In Study 2, surprisingly, we found that participants in both the competition and co-operation condition reported lower perceptions of realistic threat than participants in the control condition. So even though the results were consistent with our prediction that a focus on co-operation would lead to lower perceived realistic threat, we found the opposite of what we expected in the competition condition. It is not clear why this may have happened, however this pattern was not replicated in Study 3. In Study 2 we also found that the co-operation condition lead to significantly lower perceptions of symbolic threat than the competition condition, and marginally significantly lower perceptions of symbolic threat than the control condition. This finding suggests that in Study 2, the co-operation condition lead to a decreased perception that Syrian refugees were a threat to in-group world views. Again this was not replicated in Study 3. It is difficult to draw conclusions on the effectiveness of the co-operation condition reducing prejudiced attitudes and perceptions of threat due to the inconsistent results across studies and

therefore further research is needed to clarify these results. However, it is important to note that the addition of a self-threat in Study 3 prior to participants completing the dependent variable measures may have contributed to some differences in these results across studies.

Finally, Study 3 included the addition of a self-threat manipulation. We did find some evidence consistent with past research suggesting that prejudice may serve a self-enhancement function (Fein & Spencer, 1997; Jordan et al., 2005) as participants in the threat condition reported significantly more intergroup anxiety than participants in the no threat condition. Intergroup anxiety reflects feeling personally threatened in contrast with symbolic and realistic threats that refer to threats to the in-group. Therefore, the relation between threat and intergroup anxiety could be a result of a direct self-threat being reflected in feeling more personally threatened overall.

Limitations and Future Directions

It is important to note that one limitation of the current research is a lack of statistical power, particularly in Study 3. According to *a priori* power analyses, in Study 2 we had a sufficient sample size to detect a medium effect. In Study 3, according to *a priori* power analyses, we did not have sufficient power to detect even a medium effect, and may thus be particularly underpowered when conducting more complex analyses that required testing multiple interactions. Effect sizes for Studies 1 through 3 mainly range from small to medium, therefore we may not be detecting small effects that do indeed exist. Future research could address this problem by either conducting studies where the resources exist to collect larger samples or by conducting simpler, smaller studies where fewer participants are required to test effects.

Another limitation of the current research is the specificity and make-up of the participants in the study samples. Specifically, Studies 1 through 3 consist of exclusively Canadian undergraduate students enrolled in psychology classes at Wilfrid Laurier University. Furthermore, our participants are predominantly White/European females. Thus, the generalizability of our findings may be limited. Individuals enrolled in post-secondary education and taking psychology courses may be aware that prejudice is being studied and therefore unwilling to respond in ways that might make them appear prejudiced due to social desirability concerns. It would also be ideal to collect a gender balanced sample in order to more accurately determine whether gender differences do in fact exist.

Another possible limitation, particularly in Study 2 and 3 is the focus on Syrian refugees as the out-group. Firstly, refugees may be perceived as a particularly vulnerable subgroup of immigrants. Thus it is possible that participants would be less likely to derogate them as they may not be seen as competition. Future research should further examine attitudes towards immigrants in general versus vulnerable sub-populations of immigrants such as refugees. However, Syrian refugees were specifically chosen as the out-group in Study 2 and 3 in order to make context more relevant to participants. Coverage of the Canadian government bringing 250,000 government sponsored refugees into Canada in a short time frame was prominent in Canadian media during the time both Study 2 and 3 were conducted. Furthermore, public opinion on this issue was noticeably mixed.

The Canadian government and particularly Prime Minister Justin Trudeau have promoted a positive reception to Syrian refugees. The government taking this stance could influence Canadians' views in one of two ways. If they are supportive of the Canadian Liberal government, they may be more accepting of Syrian refugees. However, if they are critical of the

Canadian Liberal government, they may be more likely to have negative views of Syrian refugees. We did include a measure, mirroring the prejudiced attitudes measure, giving participants the opportunity to derogate the Canadian Liberal government. In Study 2 and 3 derogation of the Liberal government was positively correlated with derogation of Syrian refugees as evidenced across prejudiced attitudes, realistic threat, symbolic threat, and intergroup anxiety reports (all p 's < .01). As the article participants read outlined the Liberal government's role in bringing a large number of Syrian refugees to Canada, it is hard to distinguish whether these attitudes reflect political orientation or just an extension of prejudice towards Syrian refugees. As such, future research would benefit from including a more direct measure of political affiliation and examining how it relates to prejudiced attitudes. Recent research suggests that political affiliations differentially predict prejudiced attitudes, such that liberals and conservatives are equally intolerant of groups that are ideologically dissimilar and threatening to their personal worldviews (Chambers, Schlenker, & Collisson, 2013; Brandt, Reyna, Chambers, Crawford, & Wetherell, 2014). Thus, examining attitudes towards a variety of out-groups may be particularly important when considering prejudice.

Future research may also benefit from examining how attitudes towards immigrants vary by location and relevant current events. For example, in the United States' 2016 presidential election, immigration policies have become a prominent controversial topic, with the successful Republican nominee, Donald Trump, publicly derogating specific subsets of immigrants. In the United Kingdom, a recent referendum on whether to exit the European Union focused attention on immigration policies in the media. In these and other instances around the world, it would be important to examine how perceptions of immigrants vary and how media coverage as well as

prominent public figures' derogation or acceptance of out-groups may influence differences in the acceptability and prevalence of out-group derogation.

There might also be some limitations with how we measured our key independent variables, agency and communion. In Study 1 specifically, when examining dispositional levels of agency and communion there may not have been a clear distinction as to whether being generally communal and being exclusively communal to one's own in-group. Particularly, in Study 1 we did not see high communion attenuate the relation between high agency and prejudiced attitudes and authoritarian ideologies; rather, communion was negatively associated with these variables at low agency. It is possible that individuals high in agency may have a different conceptualization of communion than individuals low in agency. Someone motivated by both agency and communion may characterize communion in more agentic terms, such as helping others to the extent that it benefits themselves and does not interfere with other agentic concerns. This possibility could suggest that these individuals will be helpful and benevolent towards members of their own in-group but still derogate out-group members to maintain feelings of superiority and status. On the other hand, individuals who are motivated by communion and have less concern with agency may have a more general concept of communion, being helpful and benevolent to everyone regardless of group status.

One of the items in the communal values subscale was loyalty, and was further described as "being faithful to friends, family, and group." Although examining this specific item did not yield any significantly different patterns in relation to prejudiced attitudes and authoritarian ideologies, it is possible that some individuals equate communion with in-group loyalty. There is evidence to suggest that even though in-group favouritism does not necessitate negative attitudes towards out-groups, this in-group bias may result in discrimination towards out-groups (e.g.,

Brewer, 1999). Furthermore, there is evidence to suggest that out-group discrimination is most likely to occur as a result of in-group favouritism when intergroup comparisons are being made (Turner, Brown, & Tajfel, 1979; Mummendey, Klink, & Brown, 2001). Therefore future research would benefit from further examining how perceptions of communion may vary between individuals. Specifically, it would be important to examine how the interaction of agency and communion may predict in-group favouritism.

Another limitation regarding our key independent variables in Study 2 and 3 is that we administered trait measures of agency, communion and unmitigated agency rather than adapting them to state instructions. Trait instructions may not be sensitive enough to detect any situational changes in agency or communion that may have occurred. Using state instructions for these variables in future research may allow for more sensitivity to detect fluctuations in these variables that occur as a result of a manipulation.

Conclusion

In conclusion, we did not find consistent evidence suggesting that agency and communion motivations underlie prejudice as a form of self-enhancement. Further research is needed to further expand on our findings and disentangle how these broad motives influence prejudiced attitudes, if at all. Some evidence suggested that high agency and low communion may motivate authoritarian ideologies and prejudiced attitudes. On the other hand, agency was negatively associated with intergroup threat. We consistently found that focusing participants on competition led to increased general zero-sum beliefs and beliefs that narcissistic qualities such as selfishness are positive and beneficial. We found some evidence that a focus on co-operation could reduce the positive relation between unmitigated agency and negative attitudes towards

Syrian refugees. However, we did not see any attenuating effects of a focus on co-operation on unmitigated agency for other dependent variables, including realistic threat, symbolic threat, and intergroup anxiety. In fact, outside of prejudiced attitudes, unmitigated agency was associated, albeit not consistently, with realistic threat, symbolic threat, and intergroup anxiety, variables all strongly predictive of prejudiced attitudes in past research (Stephan & Stephan, 2000). We also found that beliefs about narcissistic qualities being beneficial consistently led to increased perceptions of symbolic threat. Finally, experiencing a self-threat led to increased anxiety about interacting with Syrian refugees. Future research will need to further elucidate whether agency and communion as well as lay beliefs about these motives are related to prejudiced attitudes, other predictors of prejudice, general zero-sum beliefs, and narcissism lay beliefs. In doing so, it will be important to continue to consider the distinct role of unmitigated agency.

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AGENCY AND COMMUNION IN PREJUDICE

Table 1
Overall Descriptive Statistics and Inter-Measure Correlations (Study 1)

Measure/Statistic	1	2	3	4	5	6	7	8
1. Agency	—							
2. Communion	.24*	—						
3. Unmitigated Agency	.21*	-.50**	—					
4. Self-Esteem	.20*	.15	-.02	—				
5. Narcissism	.63**	-.15	.48**	.09	—			
6. Communal Narcissism	.41*	.37**	-.006	.08	.30**	—		
7. Authoritarian Ideologies	.22**	-.10	.17*	-.03	.19*	.10	—	
8. Prejudiced Attitudes	-.04	-.13	.07	-.10	.08	-.06	.46**	—
M	.001	-.01	20.12	5.08	16.20	4.56	-.001	.0003
SD	.86	.84	4.47	.42	7.39	.90	.85	.84

Note: Agency, communion, authoritarian ideologies, and prejudiced attitudes were standardized.

* $p < .05$, ** $p < .01$

Table 2
Regression Coefficients for Authoritarian Ideologies (Study 1)

Variable	Model 1					Model 2				
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Agency	.26	.08	.26	3.04	.003	.24	.08	.24	2.82	.006
Communion	-.16	.09	-.16	-1.86	.066	-.14	.09	-.14	-1.64	.102
Agency x communion						.20	.10	.20	2.07	.041
R^2			.07					.10		
<i>F</i> for change in R^2			5.29		.006			4.26		.041

Table 3
Regression Coefficients for Prejudiced Attitudes Regression (Study 1)

Variable	Model 1					Model 2				
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Agency	-.01	.09	-.02	-.17	.868	-.03	.09	-.03	-.37	.711
Communion	-.13	.09	-.13	-1.45	.151	-.12	.09	.11	-1.22	.224
Agency x communion						.19	.10	.17	1.95	.054
R^2			.02					.05		
<i>F</i> for change in R^2			1.17		.312			3.79		.054

Table 4
Overall Descriptive Statistics and Inter-Measure Correlations (Study 2)

Measure /Statistic	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
1. Pre-Test Agency	—																
2. Pre-Test Communion	.11	—															
3. Pre-Test Unmitigated Agency	.08	-.53**	—														
4. Agency	.67**	-.05	.14*	—													
5. Communion	-.04	.66**	-.37**	-.08	—												
6. Unmitigated Agency	.04	-.46**	.62**	.10	-.51**	—											
7. Prejudiced Attitudes	.05	-.24**	.28**	.06	-.28**	.40**	—										

(table continues)

Measure /Statistic	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17
8. Intergroup Anxiety	-.17*	-.14*	.24**	-.15*	-.17*	.32**	.63**	—									
9. Symbolic Threat	.05	-.03	.17**	.07	-.01	.21**	.56**	.52**	—								
10. Realistic Threat	.10	-.17*	.26**	.10	-.20**	.31**	.66**	.52**	.61**	—							
11. Zero-Sum Beliefs	-.15*	-.27**	.33**	-.09	-.24**	.39**	.16*	.23**	.13*	.18**	—						
12. Narcissism Lay Beliefs	-.17*	-.22**	.29**	-.07	-.17*	-.41**	.20*	.28**	.25**	.16*	.69**	—					
13. Pre-Test Self-Esteem	.42**	.003	.002	.30**	-.09	.03	.03	-	-.03	.04	-	-	—				
								.25**			.18**	.16*					
14. Self-Esteem Time 1	.39**	.06	-.02	.40**	-.01	-.03	.02	-.04	.06	.08	-.02	-.13	.42**	—			
15. Self-Esteem Time 2	.04	.06	.08	.16*	-.02	-.07	-.11	-.15*	-.06	-.06	.07	.01	.16*	.23**	—		
16. Narcissism	.43**	-.18**	.32**	.46**	-.10	.31**	.19	.05	.06	.20**	.03	.04	.18**	.17*	.06	—	
17. Attitude Towards Liberal Government ^a	.06	-.20**	.26**	.02	-.28**	.30**	.60**	.44**	.45**	.57**	.13	.16*	.02	.06	-.07	.122	—
M	26.17	30.12	19.15	26.38	31.25	18.60	2.68	4.12	5.46	4.67	3.50	4.66	5.11	5.18	5.14	13.69	3.47
SD	4.93	4.99	4.37	4.94	4.66	4.69	1.69	1.71	1.29	1.40	1.07	1.27	.43	.38	.85	6.59	1.45

* $p < .05$, ** $p < .01$, *** $p < .001$

^a Higher scores indicate more negative attitudes towards the Liberal government

Table 5

Manipulation Check Variables by Article Condition, Controlling for Pre-Test EPAQ Scores (Study 2)

Source	Pre-Test Agency				Pre-Test Communion				Pre-Test Unmitigated Agency				Article			
Dependent Variable	<i>df</i>	<i>F</i>	η_p^2	<i>p</i>	<i>df</i>	<i>F</i>	η_p^2	<i>p</i>	<i>df</i>	<i>F</i>	η_p^2	<i>p</i>	<i>df</i>	<i>F</i>	η_p^2	<i>p</i>
Agency	1	180.23	.456	<.001	1	3.69	.017	.056	1	.24	.001	.624	2	.07	.001	.930
Communion	1	5.26	.024	.023	1	117.10	.352	<.001	1	.08	<.001	.783	2	1.13	.010	.324
Unmitigated Agency	1	.12	.001	.727	1	8.75	.039	.003	1	70.14	.245	<.001	2	.91	.008	.404
Zero-Sum Beliefs	1	6.89	.031	.312	1	1.03	.005	.312	1	16.57	.071	<.001	2	3.70	.033	.026
Narcissism Lay Beliefs	1	8.67	.040	.004	1	.12	.001	.725	1	14.37	.065	<.001	2	5.38	.050	.005

Table 6

Prejudiced Attitudes by Article Condition and Pre-Test EPAQ Scores (Study 2)

Source	<i>df</i>	<i>F</i>	η_p^2	<i>p</i>
Article	2	.63	.006	.536
Pre-Test Agency	1	.68	.003	.410
Pre-Test Communion	1	3.33	.016	.070
Pre-Test Unmitigated Agency	1	6.16	.029	.014
Article x Pre-Test Agency	2	.27	.003	.762
Article x Pre-Test Communion	2	2.03	.020	.135
Article x Pre-Test Unmitigated Agency	2	2.64	.025	.074
Pre-Test Agency x Pre-Test Communion	1	.04	<.001	.850
Article x Pre-Test Agency x Pre-Test Communion	2	1.03	.010	.359

Table 7

Realistic Threat by Article Condition and Pre-Test EPAQ Scores (Study 2)

Source	<i>df</i>	<i>F</i>	η_p^2	<i>P</i>
Article	2	4.46	.041	.013
Pre-Test Agency	1	.76	.004	.384
Pre-Test Communion	1	.13	.001	.716
Pre-Test Unmitigated Agency	1	7.90	.037	.005
Article x Pre-Test Agency	2	.28	.003	.757
Article x Pre-Test Communion	2	.03	<.001	.971
Article x Pre-Test Unmitigated Agency	2	.02	<.001	.977
Pre-Test Agency x Pre-Test Communion	1	1.97	.009	.162
Article x Pre-Test Agency x Pre-Test Communion	2	.80	.008	.449

Table 8

Symbolic Threat by Article Condition and Pre-Test EPAQ Scores (Study 2)

Source	<i>df</i>	<i>F</i>	η_p^2	<i>P</i>
Article	2	1.90	.018	.152
Pre-Test Agency	1	.02	<.001	.881
Pre-Test Communion	1	2.12	.010	.147
Pre-Test Unmitigated Agency	1	7.31	.034	.007
Article x Pre-Test Agency	2	1.05	.010	.351
Article x Pre-Test Communion	2	.27	.003	.764
Article x Pre-Test Unmitigated Agency	2	.67	.006	.514
Pre-Test Agency x Pre-Test Communion	1	1.33	.006	.251
Article x Pre-Test Agency x Pre-Test Communion	2	.62	.006	.539

Table 9

Intergroup Anxiety by Article Condition and Pre-Test EPAQ Scores (Study 2)

Source	<i>df</i>	<i>F</i>	η_p^2	<i>P</i>
Article	2	1.99	.019	.139
Pre-Test Agency	1	5.32	.025	.022
Pre-Test Communion	1	.10	<.001	.749
Pre-Test Unmitigated Agency	1	11.79	.054	.001
Article x Pre-Test Agency	2	1.72	.016	.181
Article x Pre-Test Communion	2	.75	.007	.474
Article x Pre-Test Unmitigated Agency	2	.65	.006	.521
Pre-Test Agency x Pre-Test Communion	1	.004	<.001	.953
Article x Pre-Test Agency x Pre-Test Communion	2	2.45	.023	.089

Table 10

Regression Coefficients for Prejudiced Attitudes predicted by Manipulation Check Variables (Study 2)

Source	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Zero-Sum Beliefs	-.07	.14	-.04	-.48	.634
Narcissism Lay Beliefs	.10	.12	.07	.82	.415
Agency	.01	.02	.01	.22	.823
Communion	-.04	.03	-.11	-1.45	.149
Unmitigated Agency	.12	.03	.33	4.06	<.001

Table 11

Regression Coefficients for Realistic Threat predicted by Manipulation Check Variables (Study 2)

Source	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Zero-Sum Beliefs	.11	.12	.09	.95	.344
Narcissism Lay Beliefs	-.02	.10	-.01	-.14	.885
Agency	.02	.02	.08	.127	.206
Communion	-.02	.02	-.06	-.67	.505
Unmitigated Agency	-.7	.03	.25	2.99	.003

Table 12

Regression Coefficients for Symbolic Threat predicted by Manipulation Check Variables (Study 2)

Source	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Zero-Sum Beliefs	-.10	.11	-.08	-.89	.377
Narcissism Lay Beliefs	.27	.10	.26	2.78	.006
Agency	.02	.02	.07	1.01	.313
Communion	.03	.02	.12	1.56	.119
Unmitigated Agency	.05	.02	.19	2.24	.026

Table 13
Regression Coefficients for Intergroup Anxiety predicted by Manipulation Check Variables (Study 2)

Source	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Zero-Sum Beliefs	-.05	.14	-.03	-.34	.732
Narcissism Lay Beliefs	.28	.12	.20	2.28	.024
Agency	-.06	.02	-.16	-2.54	.012
Communion	-.01	.03	-.02	-.20	.839
Unmitigated Agency	.09	.03	.25	3.14	.001

Table 14
Regression Coefficients for Self-Esteem Time 2 (Study 2)

Variable	Model 1					Model 2				
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>
Self-Esteem Time 1	.52	.15	.23	3.38	.001	.50	.16	.22	3.23	.001
Prejudiced Attitudes						-.04	.05	-.08	-.72	.470
Realistic Threat						.01	.06	.02	.21	.837
Symbolic Threat						.02	.06	.03	.28	.783
Intergroup Anxiety						-.05	.05	-.10	-1.12	.264
<i>R</i> ²			.05					.07		
<i>F</i> for change in <i>R</i> ²		11.44			.001			1.01		.401

Table 15
Overall Descriptive Statistics and Inter-Measure Correlations (Study 3)

Measure /Statistic	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Agency	—												
2. Communion	.10	—											
3. Unmitigated Agency	.17*	-.15*	—										
4. Prejudiced Attitudes	-.06	.01	.20**	—									
5. Intergroup Anxiety	-.16	.05	-.01	.65**	—								
6. Symbolic Threat	.07	-.04	-.02	.57**	.54**	—							
7. Realistic Threat	.02	.09	.05	.60**	.56**	.60**	—						
8. Zero-Sum Beliefs	.11	-.02	.28**	.11	.05	.13	.08	—					
9. Narcissism Lay Beliefs	.17*	-.03	.23**	.20**	.11	.23**	.09	.59**	—				
10. Self-Esteem	.13	.02	-.06	-.10	-.01	-.12	-.03	.14*	-.04	—			
11. Narcissism	.43**	.07	.44**	.19**	-.04	.19**	.12	.16*	.23**	.004	—		
12. Communal Narcissism	.29**	.29**	.04	-.07	-.09	.09	.04	.04	.15*	.05	.35*	—	

(table continues)

Measure /Statistic	1	2	3	4	5	6	7	8	9	10	11	12	13
13. Attitude Towards Liberal Government ^a	-.01	-.02	.07	.61**	.46**	.48**	.53**	.11	.23**	-.01	.06	-.01	—
M	27.20	31.17	19.53	2.5	3.95	5.31	4.55	3.68	4.79	5.01	8.78	4.46	3.19
SD	4.73	8.16	4.63	1.59	1.59	1.28	1.48	1.05	1.16	.85	4.12	.88	1.33

* $p < .05$, ** $p < .01$, *** $p < .001$

^a Higher scores indicate more negative attitudes towards the Liberal government

Table 16
Manipulation Check Variables by Article Condition (Study 3)

Source	Manipulation Condition			
Dependent Variable	df	F	η_p^2	p
Agency	2	4.02	.039	.020
Communion	2	1.09	.011	.339
Unmitigated Agency	2	2.69	.027	.070
Zero-Sum Beliefs	2	18.37	<.001	.157
Narcissism Lay Beliefs	2	12.33	<.001	.111

Table 17

Prejudice Dependent Variables by Article and Feedback Condition (Study 3)

Source	Article				Feedback				Article x Feedback			
	<i>df</i>	<i>F</i>	η_p^2	<i>p</i>	<i>df</i>	<i>F</i>	η_p^2	<i>p</i>	<i>df</i>	<i>F</i>	η_p^2	<i>p</i>
Prejudice Attitudes	2	.40	.004	.669	1	.17	.001	.687	2	.82	.008	.443
Realistic Threat	2	.27	.003	.763	1	.14	.001	.707	2	.59	.006	.554
Symbolic Threat	2	1.61	.016	.202	1	.56	.003	.454	2	.44	.004	.647
Intergroup Anxiety	2	.59	.006	.554	1	4.84	.03	.029	2	.18	.001	.840

Table 18

Regression Coefficients for Prejudiced Attitudes predicted by Manipulation Check Variables (Study 3)

Variable	B	SE B	β	<i>t</i>	<i>p</i>
	(unstandardized)		(Standardized)		
Feedback	.02	.11	.01	.19	.850
Agency	-.04	.02	-.12	-1.70	.090
Communion	.01	.01	.07	.93	.356
Unmitigated Agency	.07	.03	.20	2.64	.009
Zero-Sum Beliefs	-.10	.14	-.06	-.71	.480
Narcissism Lay Beliefs	.30	.12	.22	2.42	.017

Table 19

Regression Coefficients for Realistic Threat predicted by Manipulation Check Variables (Study 3)

Variable	B (unstandardized)	SE B	B (Standardized)	<i>t</i>	<i>p</i>
Feedback	.03	.12	.02	.30	.764
Agency	-.01	.02	-.02	-.31	.759
Communion	.02	.01	.12	1.44	.151
Unmitigated Agency	.01	.03	.04	.53	.598
Zero-Sum Beliefs	.04	.13	.03	.33	.744
Narcissism Lay Beliefs	.08	.12	.06	.69	.489

Table 20

Regression Coefficients for Symbolic Threat predicted by Manipulation Check Variables (Study 3)

Variable	B (unstandardized)	SE B	B (Standardized)	<i>t</i>	<i>p</i>
Feedback	.07	.09	.05	.71	<.001
Agency	.01	.02	.04	.61	.542
Communion	-.01	.01	-.06	-.78	.440
Unmitigated Agency	-.03	.02	-.10	-1.28	.202
Zero-Sum Beliefs	.04	.11	.03	.33	.745
Narcissism Lay Beliefs	.24	.10	.21	2.39	.018

Table 21

Regression Coefficients for Intergroup Anxiety predicted by Manipulation Check Variables (Study 3)

Variable	B (unstandardized)	SE B	B (Standardized)	<i>t</i>	<i>p</i>
Feedback	.24	.13	.13	1.85	.066
Agency	-.07	.03	-.17	-2.36	.020
Communion	.02	.02	.07	1.00	.317
Unmitigated Agency	-.004	.03	-.01	-.13	.896
Zero-Sum Beliefs	-.01	.15	-.01	-.09	.926
Narcissism Lay Beliefs	.24	.14	.16	1.75	.082

AGENCY AND COMMUNION IN PREJUDICE

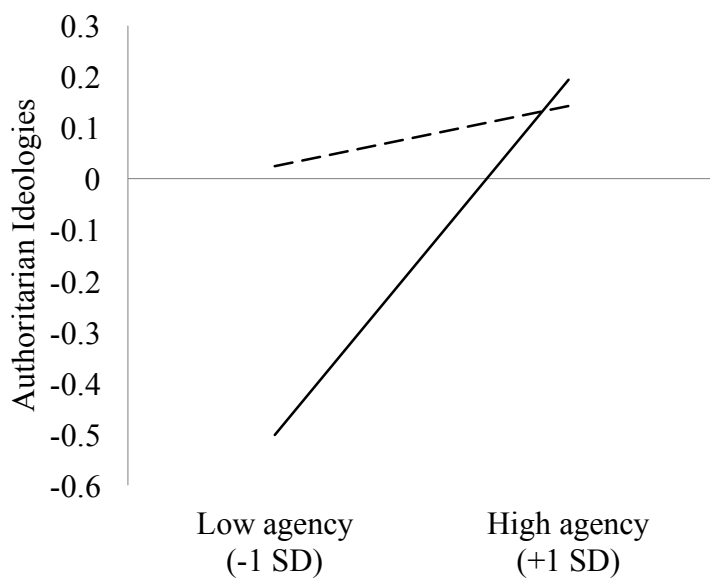


Figure 1. Agency and communion predicting authoritarian ideologies.

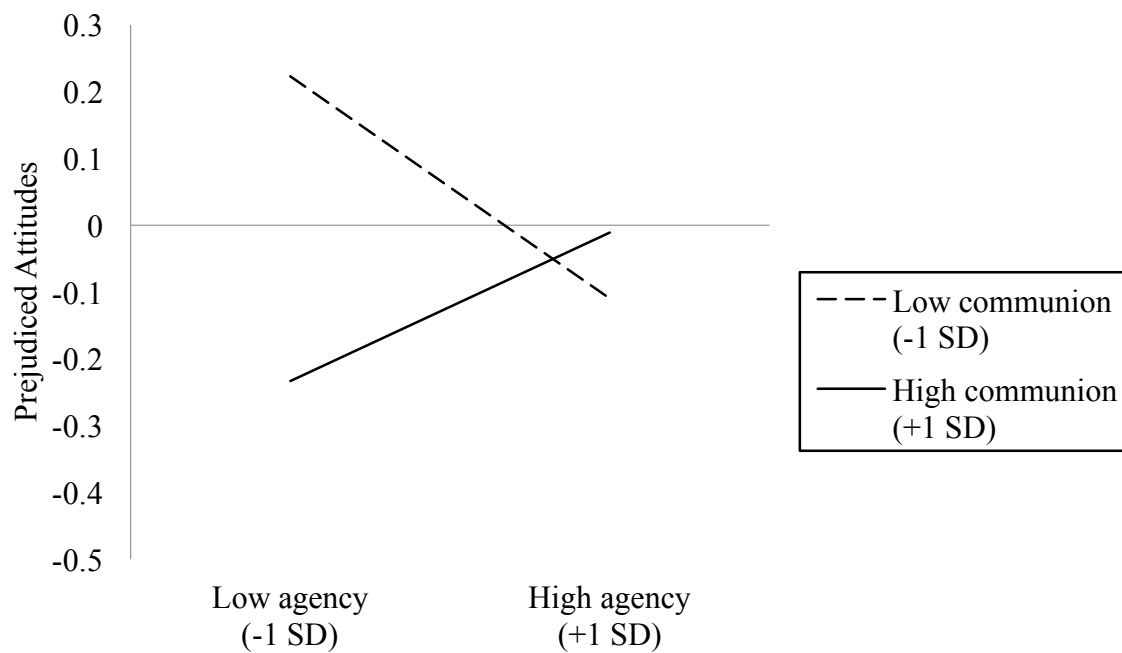


Figure 2. Agency and communion predicting prejudiced attitudes.

AGENCY AND COMMUNION IN PREJUDICE

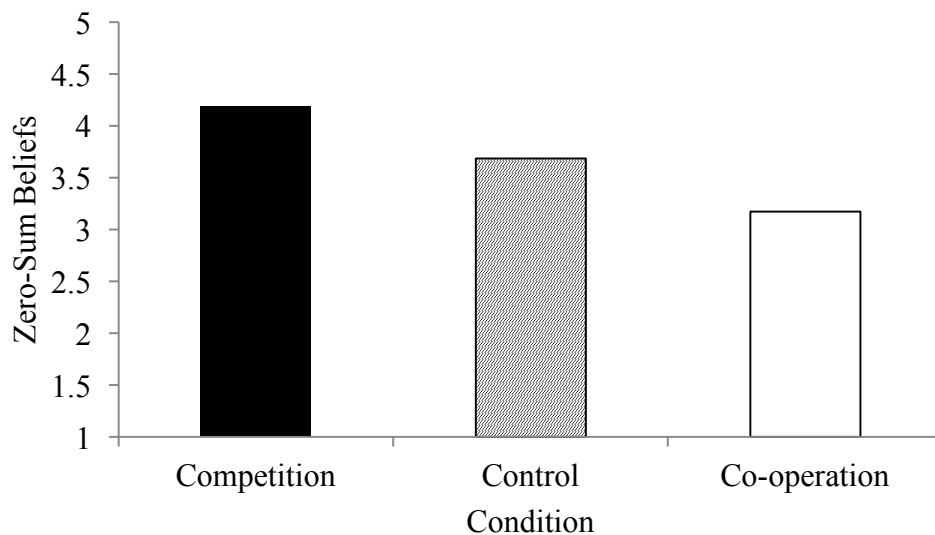


Figure 3. Zero-sum beliefs means across conditions.

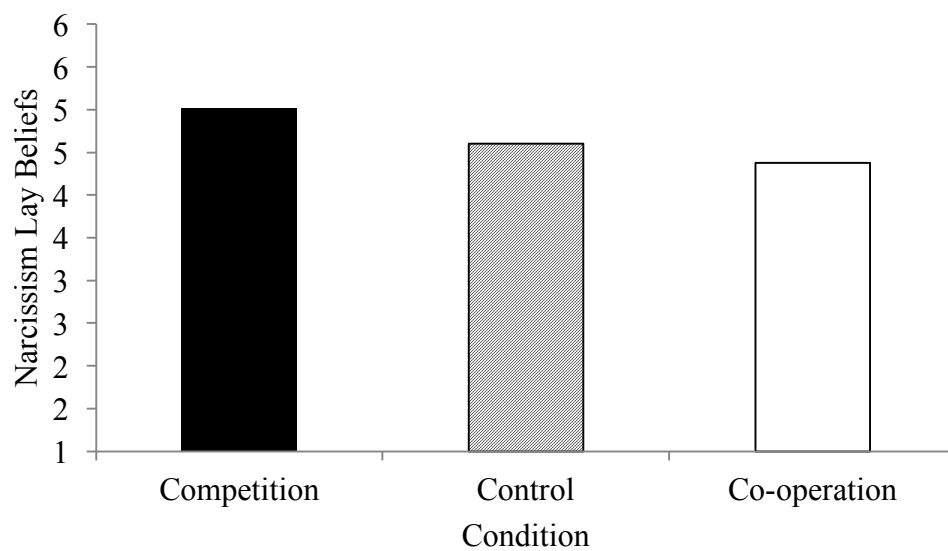


Figure 4. Narcissism lay beliefs means across conditions.

AGENCY AND COMMUNION IN PREJUDICE

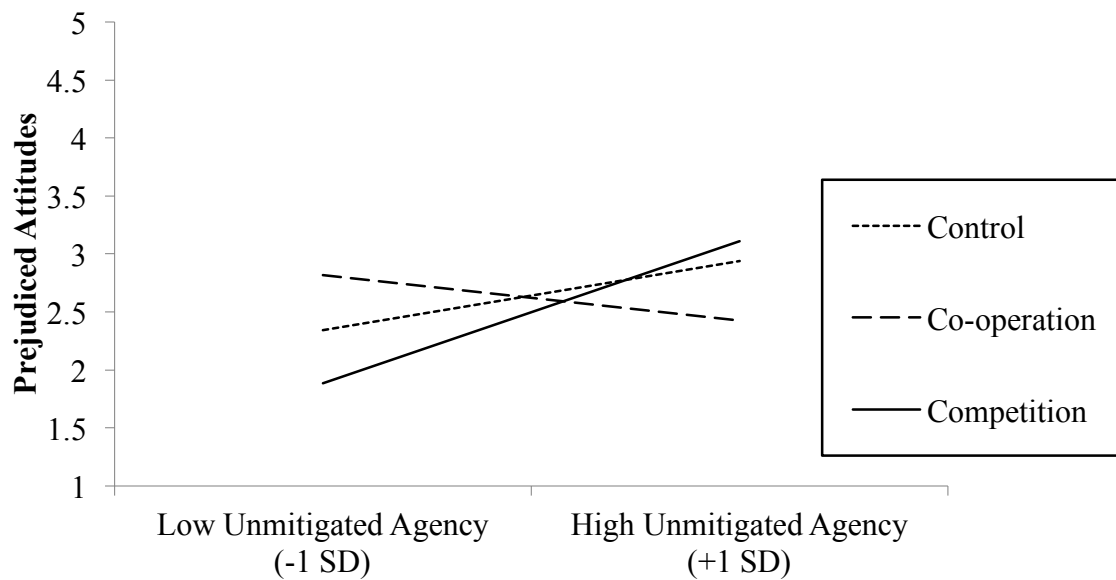


Figure 5. Pre-test unmitigated scores by condition predicting prejudiced attitudes.

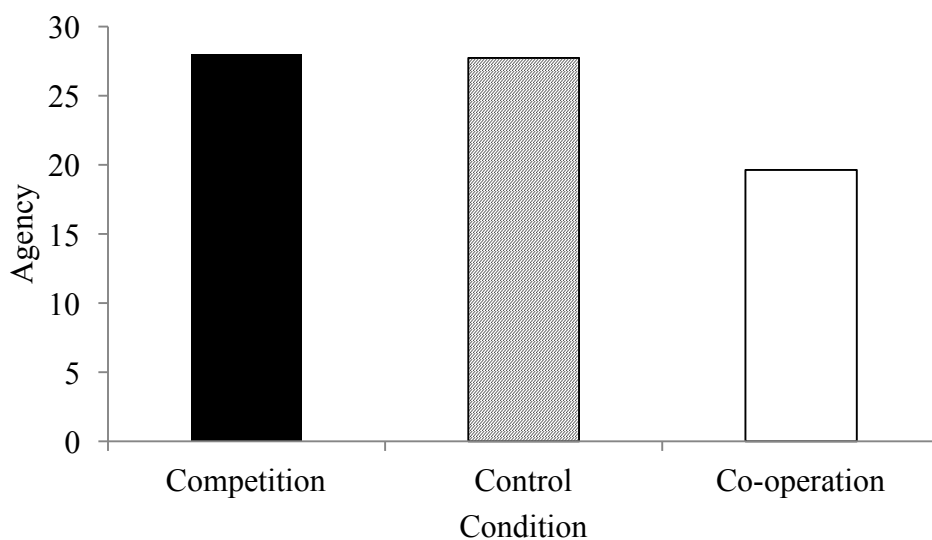


Figure 6. Study 3: Agency means across article conditions.

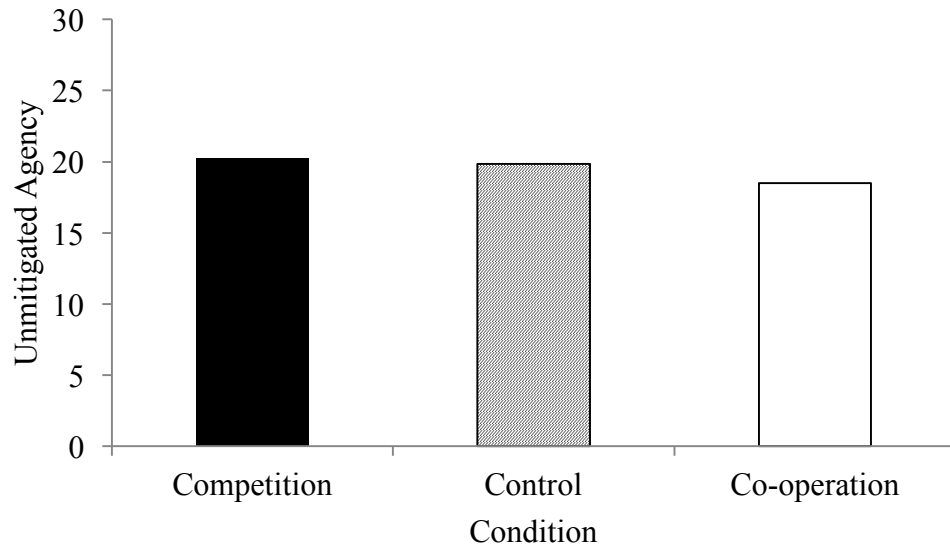


Figure 7. Study 3: Unmitigated agency means across article conditions.

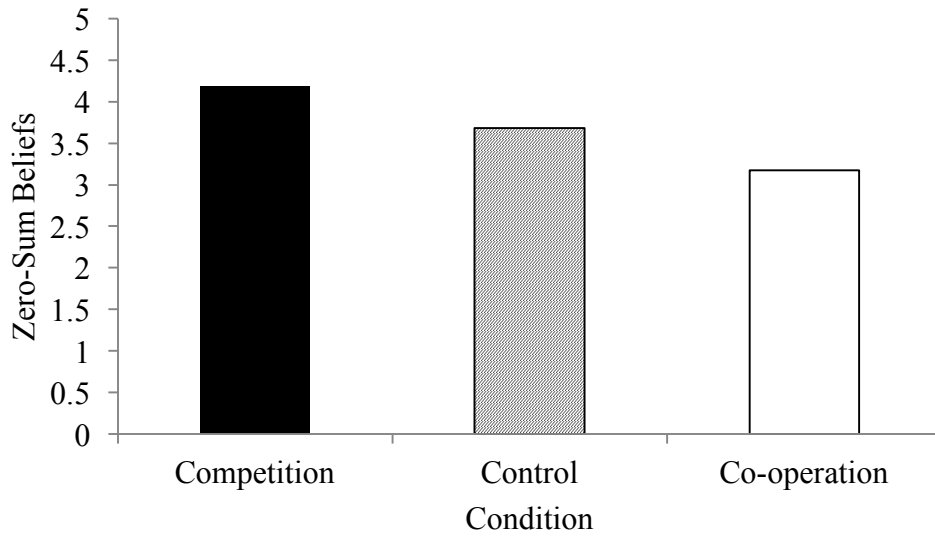


Figure 8. Zero-sum beliefs means across article conditions

Figure 8. Zero-sum beliefs means across article conditions

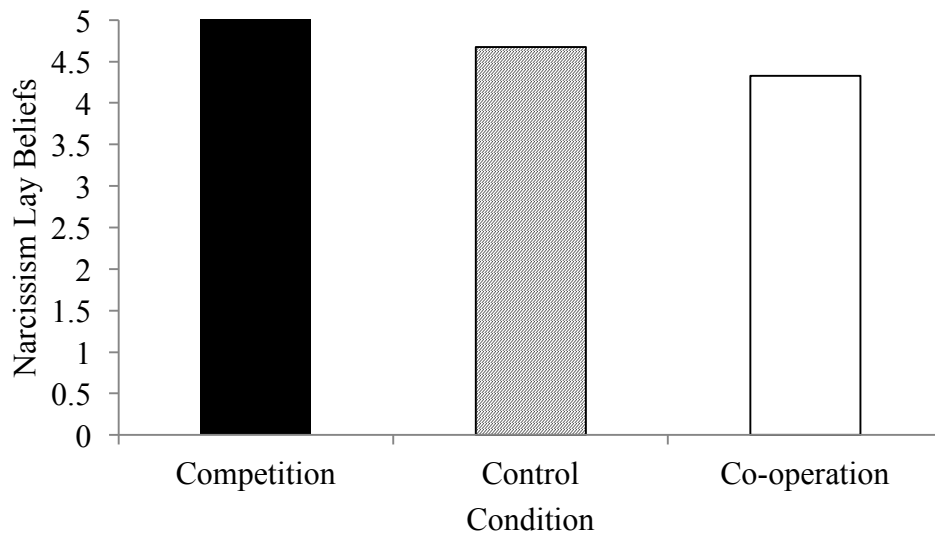


Figure 9. Narcissism lay beliefs means across article conditions.

AGENCY AND COMMUNION IN PREJUDICE

Appendix A - Study 1 Materials**Extended Version of the Personality Attributes Questionnaire (EPAQ; Spence, et al., 1979)**

The items below consist of a pair of contradictory characteristics--that is, you cannot be both at the same time. The numbers form a scale between the two extremes. You are to circle the number that describes where you fall on the scale.

not at all arrogant	1 2 3 4 5	very arrogant
not at all independent	1 2 3 4 5	very independent
not at all emotional	1 2 3 4 5	very emotional
looks out for self	1 2 3 4 5	looks out for others
very passive	1 2 3 4 5	very active
not at all egotistical	1 2 3 4 5	very egotistical
difficult to devote self	1 2 3 4 5	easy to devote self
completely to others		completely to others
very rough	1 2 3 4 5	very gentle
not at all helpful to others	1 2 3 4 5	very helpful to others
not at all boastful	1 2 3 4 5	very boastful
not at all competitive	1 2 3 4 5	very competitive
not at all kind	1 2 3 4 5	very kind
not at all aware of others' feelings	1 2 3 4 5	very aware of others' feelings
can make decisions easily	1 2 3 4 5	has difficulty making decisions
not at all greedy	1 2 3 4 5	very greedy
gives up easily	1 2 3 4 5	never gives up
not at all self-confident	1 2 3 4 5	very self-confident
feels very inferior	1 2 3 4 5	feels very superior
not at all dictatorial	1 2 3 4 5	very dictatorial
not at all understanding of others	1 2 3 4 5	very understanding of others
not at all cynical	1 2 3 4 5	very cynical
very cold in relations with others	1 2 3 4 5	very warm in relations with others
not at all hostile	1 2 3 4 5	very hostile
goes to pieces under pressure	1 2 3 4 5	stands up well under pressure

Agentic and Communal Values Scale (ACV; Trapnell & Paulhus, 2012)

Below are 24 different values that people rate of different importance in their lives. **FIRST READ THROUGH THE LIST** to familiarize yourself with all the values. While reading over the list, consider which ones tend to be most important to you and which tend to be least important to you. After familiarizing yourself with the list, rate the relative importance of each value to you as "A GUIDING PRINCIPLE IN MY LIFE." It is important to spread your ratings out as best you can—be sure to use some numbers in the lower range, some in the middle range, and some in the higher range. Avoid using too many similar numbers. Work fairly quickly.

Not

Quite

Highly

Important to Me					Important to Me				Important to Me
1	2	3	4	5	6	7	8	9	

1. WEALTH (financially successful, prosperous)
2. PLEASURE (having one’s fill of life’s pleasures and enjoyments)
3. FORGIVENESS (pardoning others’ faults, being merciful)
4. INFLUENCE (having impact, influencing people and events)
5. TRUST (being true to one’s word, assuming good in others)
6. COMPETENCE (displaying mastery, being capable, effective)
7. HUMILITY (appreciating others, being modest about oneself)
8. ACHIEVEMENT (reaching lofty goals)
9. ALTRUISM (helping others in need)
10. AMBITION (high aspirations, seizing opportunities)
11. LOYALTY (being faithful to friends, family, and group)
12. POLITENESS (courtesy, good manners)
13. POWER (control over others, dominance)
14. HARMONY (good relations, balance, wholeness)
15. EXCITEMENT (seeking adventure, risk, an exciting lifestyle)
16. HONESTY (being genuine, sincere)
17. COMPASSION (caring for others, displaying kindness)
18. STATUS (high rank, wide respect)
19. CIVILITY (being considerate and respectful toward others)
20. AUTONOMY (independent, free of others’ control)
21. EQUALITY (human rights and equal opportunity for all)
22. RECOGNITION (becoming notable, famous, or admired)
23. TRADITION (showing respect for family and cultural values)
24. SUPERIORITY (defeating the competition, standing on top)

Agentic and Communal Traits (ACT; Gebauer et al., 2013)

How well does each of the following generally describe you?

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

1. Adventurousome
2. Affectionate
3. Ambitious
4. Caring

5. Bossy
6. Compassionate
7. Clever
8. Faithful
9. Competitive
10. Honest
11. Dominant
12. Kind
13. Leader
14. Patient
15. Outgoing
16. Sensitive
17. Rational
18. Trusting
19. Wise
20. Understanding

Narcissistic Personality Inventory (NPI; Raskin & Terry, 1988)

This inventory consists of a number of pairs of statements with which you may or may not identify.

Consider this example:

A. I like having authority over people

B. I don't mind following orders

Which of these two statements is closer to your own feelings about yourself? If you identify more with "liking to have authority over people" than with "not minding following orders", then you would choose option A.

You may identify with both A and B. In this case you should choose the statement which seems closer to yourself **RIGHT NOW**. Or, if you do not identify with either statement at this moment, select the one which is least objectionable or remote. In other words, read each pair of statements and then choose the one that is closer to your own feelings. Indicate your answer by selecting the appropriate letter (A or B). Please do not skip any items.

1. A. I have a natural talent for influencing people.
B. I am not good at influencing people.
2. A. Modesty doesn't become me.
B. I am essentially a modest person.
3. A. I would do almost anything on a dare.

- B. I tend to be a fairly cautious person.
4. A. When people compliment me I sometimes get embarrassed.
B. I know that I am good because everybody keeps telling me so.
5. A. The thought of ruling the world frightens the hell out of me.
B. If I ruled the world it would be a better place.
6. A. I can usually talk my way out of anything.
B. I try to accept the consequences of my behaviour.
7. A. I prefer to blend in with the crowd.
B. I like to be the center of attention.
8. A. I will be a success.
B. I am not too concerned about success.
9. A. I am no better or worse than most people.
B. I think I am a special person.
10. A. I am not sure if I would make a good leader.
B. I see myself as a good leader.
11. A. I am assertive.
B. I wish I were more assertive.
12. A. I like to have authority over other people.
B. I don't mind following orders.
13. A. I find it easy to manipulate people.
B. I don't like it when I find myself manipulating people.
14. A. I insist upon getting the respect that is due me.
B. I usually get the respect that I deserve.
15. A. I don't particularly like to show off my body.
B. I like to show off my body.
16. A. I can read people like a book.
B. People are sometimes hard to understand.
17. A. If I feel competent I am willing to take responsibility for making decisions.
B. I like to take responsibility for making decisions.
18. A. I just want to be reasonably happy.
B. I want to amount to something in the eyes of the world.
19. A. My body is nothing special.
B. I like to look at my body.
20. A. I try not to be a show off.
B. I will usually show off if I get the chance.
21. A. I always know what I am doing.
B. Sometimes I am not sure of what I am doing.
22. A. I sometimes depend on people to get things done.

- B. I rarely depend on anyone else to get things done.
23. A. Sometimes I tell good stories.
B. Everybody likes to hear my stories.
24. A. I expect a great deal from other people.
B. I like to do things for other people.
25. A. I will never be satisfied until I get all that I deserve.
B. I take my satisfactions as they come.
26. A. Compliments embarrass me.
B. I like to be complimented.
27. A. I have a strong will to power.
B. Power for its own sake doesn't interest me.
28. A. I don't care about new fads and fashions.
B. I like to start new fads and fashions.
29. A. I like to look at myself in the mirror.
B. I am not particularly interested in looking at myself in the mirror.
30. A. I really like to be the center of attention.
B. It makes me uncomfortable to be the center of attention.
31. A. I can live my life in any way I want to.
B. People can't always live their lives in terms of what they want.
32. A. Being an authority doesn't mean that much to me.
B. People always seem to recognize my authority.
33. A. I would prefer to be a leader.
B. It makes little difference to me whether I am a leader or not.
34. A. I am going to be a great person.
B. I hope I am going to be successful.
35. A. People sometimes believe what I tell them.
B. I can make anybody believe anything I want them to.
36. A. I am a born leader.
B. Leadership is a quality that takes a long time to develop.
37. A. I wish somebody would someday write my biography.
B. I don't like people to pry into my life for any reason.
38. A. I get upset when people don't notice how I look when I go out in public.
B. I don't mind blending into the crowd when I go out in public.
39. A. I am more capable than other people.
B. There is a lot that I can learn from other people.
40. A. I am much like everybody else.
B. I am an extraordinary person.

The Communal Narcissism Inventory (CNI; Gebauer et al., 2012)

People have all kinds of private thoughts about themselves. From person to person, these self-thoughts can vary quite a lot in content. We are interested in the sort of self-thoughts you possess. Below you will find a list of self-thoughts you may have. For each self-thought, please indicate whether you have this or a similar thought. Be as honest as possible. Remember, your responses are totally anonymous.

Disagree Strongly							Agree Strongly
1	2	3	4	5	6	7	

1. I am the most helpful person I know.
2. I am going to bring peace and justice to the world.
3. I am the best friend someone can have.
4. I will be well known for the good deeds I will have done.
5. I am (going to be) the best parent on this planet.
6. I am the most caring person in my social surrounding.
7. In the future I will be well-known for solving the world's problems.
8. I greatly enrich others' lives.
9. I will bring freedom to the people.
10. I am an amazing listener.
11. I will be able to solve world poverty.
12. I have a very positive influence on others.
13. I am generally the most understanding person.
14. I'll make the world a much more beautiful place.
15. I am extraordinarily trustworthy.
16. I will be famous for increasing people's well-being

Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965)

Listed below are a number of statements about how people feel about themselves. Please read each statement and decide whether you agree or disagree that the statement describes you RIGHT NOW, and to what extent. Please use the scale below and circle the number that best represents you RIGHT NOW.

Very Strongly Disagree	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree	Very Strongly Agree
------------------------------	----------------------	------------------------	----------------------	---------	-------------------	---------------------	-------------------	---------------------------

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

Social Dominance Orientation (SDO; Pratto et al., 1994)

Below are a series of statements with which you may either agree or disagree. For each statement, please indicate the degree of your agreement or disagreement by writing in a number from **1 to 7** on the line next to it. Please remember that there are no right or wrong answers, and that your first responses are usually the most accurate.

- | | | | | | | | |
|---------------------------|---|---|---|---|---|---|-------------------|
| Do not
Agree at
all | | | | | | | Strongly
Agree |
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | |
1. Some groups of people are just more worthy than others.
 2. We should do what we can to equalize conditions for different groups.
 3. In getting what your group wants, it is sometimes necessary to use force against other groups.
 4. If certain groups of people stayed in their place, we would have fewer problems.
 5. We would have fewer problems if we treated different groups more equally.
 6. To get ahead in life, it is sometimes necessary to step on other groups.
 7. No one group should dominate in society.
 8. Group equality should be our ideal.
 9. All groups should be given an equal chance in life.
 10. We must increase social equality.
 11. Superior groups should dominate inferior groups.
 12. It's probably a good thing that certain groups are at the top and other groups are at the bottom.
 13. We must strive to make incomes more equal.
 14. Sometimes other groups must be kept in their place.
 15. It would be good if all groups could be equal.

16. Inferior groups should stay in their place.

Right Wing Authoritarianism Scale (RWA; Altemeyer, 1981)

Please use the rating scale to indicate the extent of your agreement with each statement that follows (place one number beside each statement):

1	2	3	4	5	6
Disagree	Disagree	Disagree	Agree	Agree	Agree
Strongly	Somewhat	Slightly	Slightly	Somewhat	Strongly

1. Laws have to be strictly enforced if we are going to preserve our way of life.
2. People should pay less attention to the Bible and the other old traditional forms of religious guidance, and instead develop their own personal standards of what is moral and immoral.
3. Women should always remember the promise they make in the marriage ceremony to obey their husbands.
4. Our customs and national heritage are the things that have made us great, and certain people should be made to show greater respect for them.
5. Capital punishment should be completely abolished.
6. National anthems, flags, and glorification of one's country should all be de-emphasized to promote the brotherhood of all men.
7. The facts on crime, sexual immorality, and the recent public disorders all show we have to crack down harder on deviant groups and troublemakers if we are going to save our moral standards and preserve law and order.
8. A lot of society's rules regarding modesty and sexual behaviour are just customs which are not necessarily any better or holier than those which other peoples follow.
9. Our prisons are a shocking disgrace. Criminals are unfortunate people who deserve much better care, instead of so much punishment.
10. Obedience and respect for authority are the most important virtues children should learn.
11. Organizations like the army and the priesthood have a pretty unhealthy effect upon men because they require strict obedience of commands from supervisors.
12. One good way to teach certain people right from wrong is to give them a good stiff punishment when they get out of line.
13. Youngsters should be taught to refuse to fight in a war unless they themselves agree the war is justified and necessary.

14. It may be considered old-fashioned by some, but having a decent, respectable appearance is still the mark of a gentleman and, especially, a lady.
15. In these troubled times laws have to be enforced without mercy, especially when dealing with the agitators and revolutionaries who are stirring things.
16. Atheists and others who have rebelled against the established religions are no doubt every bit as good and virtuous as those who attend church regularly.
17. Young people sometimes get rebellious ideas, but as they grow up they ought to get over them and settle down.
18. Rules about being “well-mannered” and respectable are chains from the past that we should question very thoroughly before accepting.
19. The courts are right in being easy on drug offenders. Punishment would not do any good in cases like these.
20. If a child starts becoming a little too unconventional, his parents should see to it he returns to the normal ways expected by society.
21. Being kind to loafers or criminals will only encourage them to take advantage of your weakness, so it’s best to use a firm, tough hand when dealing with them.
22. A “woman’s place” should be wherever she wants to be. The days when women are submissive to their husbands and social conventions belong strictly in the past.
23. Homosexuals are just as good and virtuous as anybody else, and there is nothing wrong with being one.
24. It’s one thing to question and doubt someone during an election campaign, but once a man becomes the leader of our country we owe him our greatest support and loyalty.

Intergroup Threat (IT; Avery, et al., 1992)

Please use the following pairs of polar adjectives to describe immigrants. The numbers form a scale between the two extremes. You are to circle the number that you think best describes immigrants. Please remember that there are no right or wrong answers, and that your first responses are usually the most accurate.

Safe	1	2	3	4	5	Dangerous
Good	1	2	3	4	5	Bad
Non-threatening	1	2	3	4	5	Threatening
Can be trusted	1	2	3	4	5	Cannot be trusted
Non-violent	1	2	3	4	5	Violent

Modern Racism Scale (MRS; McConahay, et al., 1981)

Please indicate your responses to the following questions by circling your response.

Strongly Disagree	Slightly Disagree	Neither Disagree Nor Agree	Slightly Agree	Strongly Agree
0	1	2	3	4

1. Over the past few years, the government and news media have shown more respect for immigrants than they deserve.
2. It is easy to understand the anger of immigrants in Canada.
3. Discrimination against immigrants is no longer a problem in Canada.
4. Over the past few years, immigrants have gotten more economically than they deserve.
5. Immigrants have more influence on government policies than they ought to have.
6. Immigrants are getting too demanding in their push for equal rights.
7. Immigrants should not push themselves where they are not wanted.

Demographics

1. Age: _____
2. Academic Major: _____
3. Year of Study: _____
4. Gender (select one): Male Female Other
5. Cultural Background: _____

Appendix B – Study 2 Materials

State Self-Esteem Scale (Rosenberg, 1965)

Listed below are a number of statements about how people feel about themselves. Please read each statement and decide whether you agree or disagree that the statement describes you RIGHT NOW, and to what extent. Please use the scale below and circle the number that best represents you RIGHT NOW.

Note: You will complete this measure more than once during the study

Very Strongly Disagree	Strongly Disagree	Moderately Disagree	Slightly Disagree	Neutral	Slightly Agree	Moderately Agree	Strongly Agree	Very Strongly Agree
1	2	3	4	5	6	7	8	9

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

Agency and Communion Manipulation

Please take your time reading the following article. After reading you will be asked a variety of questions based on the content and your comprehension of the article, so it is important to pay attention to the content and information outlined in the article

The submit button will be disabled for 40 seconds to ensure your concentration, but feel free to take as much time as you need to finish reading the article.

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“Getting Ahead” instead of “Getting Along”

Why Nice Guys Finish Last



By Ronald Cohen Ph.D. on July 12, 2014

There are certain unfortunate truths in the world of business. One involves that classic question: “Why in the world did that person get promoted?” In most professions, people are hired because they demonstrate aptitude (or at least the potential for aptitude) at certain tasks. What matters is being better qualified, better educated, a better performer than other people. But success is also determined by how people think about and act toward others in the workplace.

Dr. Henry Gilbert and Cherie Anderson at Stanford University, have found that the happiest, most successful people prioritize “getting ahead” over “getting along” with others. This means that to thrive in life it is best to put your own needs before those of others. “There is truth to the saying ‘Nice guys finish last’. Other people are not going to look out for you, so you need to look out for yourself,” Gilbert concluded. And the benefits extend beyond the workplace. Their research demonstrates that a strong self-focus produces benefits across a variety of domains, including work, school, and relationships. Individuals who prioritize “getting ahead” have a reduced risk of depression, anxiety and other health problems, as well as enhanced self-esteem and social support. Gilbert explains, “People who expend energy on making sure that others’ needs are met end up sacrificing their own goals. Other people are generally not looking out for them, so they end up losing out on opportunities that other people receive.”

Notably, their research also demonstrates that anyone can adopt this mindset to improve their life circumstances. “You want to exude confidence and be a bit arrogant. Tell people about your accomplishments because you are your own best supporter,” says Anderson. “Seek out opportunities to benefit yourself. Ask for a promotion; take the credit you deserve for a team project; be aggressive in pursuing what’s important to you. Look out for yourself and let other people worry about themselves. You might have to step on a few toes to get to the top.”

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“Getting Ahead” while “Getting Along”

Why Nice Guys Finish First

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There are certain unfortunate truths in the world of business. One involves that classic question: “Why in the world did that person get promoted?” In most professions, people are hired because they demonstrate aptitude (or at least the potential for aptitude) at certain tasks. What matters is being better qualified, better educated, a better performer than other people. But success is also determined by how people think about and act toward others in the workplace.

Dr. Henry Gilbert and Cherie Anderson at Stanford University, have found that the happiest, most successful people prioritize both “getting ahead” and “getting along” with others. This means that that to thrive in life it is best to think about both your own needs and those of others. “There is no truth to the saying ‘Nice guys finish last’. In fact nice guys often finish first. If you look out for other people they will look out for you,” Gilbert concluded. And the benefits extend beyond the workplace. Their research demonstrates that a balance between self-focus and other-focus produces benefits across a variety of domains, including work, school, and relationships. In fact, individuals who prioritize both their own needs and others’ needs have a reduced risk of depression, anxiety and other health problems, as well as enhanced self-esteem and social support. Gilbert explains, “People who expend energy on making sure that others’ needs are met end up forging strong social connections. Other people look out for them, so they end up being given opportunities that others miss out on.”

Notably, their research also demonstrates that anyone can adopt this mindset to improve their life circumstances. “You want to exude confidence and caring. Be proud of your own and other’s accomplishments, because they will be your best supporters,” says Anderson. “Seek out opportunities to benefit yourself and others. Ask for a promotion; make sure your team gets credit for a group project; be aggressive in pursuing what’s important to you and to those around you. Look out for yourself but remember other’s best interests. You don’t need to step on other people’s toes to get to the top.”

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1. Summarize the main idea of the article in 1-2 sentences in your own words.

2. List three things the researchers suggest people to do in order to adopt the mindset to improve life circumstances.



3. Do the following statements agree with the information in the article? Select:

True if the statement agrees with the article

False if the statement does not agree with the article

a. Looking out for others means there is no time to look out for number one.

True/False

b. To improve life circumstances, one should be less self-interested and look out for other's needs.

True/False

c. The happiest people are those who prioritize both "getting ahead" and "getting along".

True/False

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Patients with Misophonia Require Interventions and Treatment

By Ronald Cohen Ph.D. on July 12, 2014 Like

Some people find the sound of nails on a chalkboard or the rumbling of a snoring spouse irritating, but what if the sound of someone breathing affected your day to day life? This is a reality for many sufferers of misophonia. Only recently garnering attention from researchers, misophonia is a condition where individuals have a decreased tolerance for certain sounds. Chewing, coughing, scratching, or pen clicking is not only irritating, but unbearable for sufferers if misphonia.

Many sufferers begin to structure their lives around their struggle with the disorder and avoid triggers by socially isolating themselves. Public spaces like restaurants or parks are readily avoided. In extreme cases, misophonia can also interfere with academic and work performance. In a study by PhD candidate Miren Edelstein at the University of California in San Diego, patients reported trouble concentrating in class or at work due to distraction from trigger noises. In some cases, students may resort to isolating themselves, taking their courses online.

The cause of misophonia is currently believed to be neurological. Age Moller, a neuroscientist at the University of Texas, describes it as a complication in how the brain processes auditory stimuli. Misophonia is still greatly misunderstood and there is a lack of research examining its causes or possible treatments. While it seems there is little help available for people with the disorder, Misophonia UK, an organization dedicated to providing information and support to misophonia sufferers, outlines a number of interventions. Tinnitus Retraining Therapy (TRT) involves teaching patients how to slowly build sound tolerance, while Cognitive Behavioural Therapy (CBT) focuses on changing negative attitudes that can contribute to the severity of the disorder. In some cases, hypnosis can be used to relax individuals. Breathing techniques are also taught so patients can learn to sooth themselves when hearing their trigger noises. Keeping a diary to record feelings and providing education to loved ones are also strategies recommended by Misophonia UK. Support groups and online forums like UK Misophonia, Selective Sound Sensitivity, and Misophonia Support also provide a way for sufferers to share their experiences and interact with others. The prevalence of misophonia is currently not documented, and it seems few seek help. Suffers of misophonia can only do so much on their own before the disorder starts intruding on their lives.


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1. Summarize the main idea of the article in 1-2 sentences in your own words.

2. List three things the researchers suggest people do in order to cope with misphonia.

--

3. Do the following statements agree with the information in the article? Select:

True if the statement agrees with the article

False if the statement does not agree with the article

a. Misphonia is a neurological disorder that makes sounds such as chewing, coughing, scratching, or pen clicking unbearable.

True/False

b. The cause of misphonia is thought to be neurological.

True/False

c. There are no suggested interventions for treatment of misphonia.

True/False

Zero-Sum Beliefs (ZSB; Crocker & Canevello, 2008)

Read each item and decide whether you agree or disagree and to what extent. If you strongly agree, circle 7; if you strongly disagree, circle 1; if you feel somewhere in between, circle one of the numbers between 1 and 7. If you feel neutral or undecided, the midpoint is 4.

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

1. One person’s success depends on another person’s failure.
2. In order to succeed in this world, it is sometimes necessary to step on others along the way.
3. My successes don’t mean much if most other people succeed at the same task.
4. An accomplishment is only really meaningful if it is rare.
5. To give to others usually requires a sacrifice on the part of the giver.
6. I believe that people are basically self-interested.

Narcissism Lay Beliefs (NLB; Jordan & Giacomin, unpublished)

Please use the scales provided to answer the following questions.

Strongly Disagree				Neither Agree or Disagree				Strongly Agree
-------------------	--	--	--	---------------------------	--	--	--	----------------

1	2	3	4	5	6	7	8	9
---	---	---	---	---	---	---	---	---

1. You need to be self-centered to get ahead in life.
2. If you are not selfish, you will get nowhere.
3. You should never let other people stand in the way of your success.
4. Most of the people who have real power in life are narcissists.
5. I believe, "If you've got it, flaunt it."
6. It is good to be a narcissist in the competitive business world.
7. Narcissists excel in politics.
8. Great leaders are egotistical.
9. There's no reason not to puff out your chest and be proud.
10. Ordinary people need direction; narcissists provide it.
11. By being a narcissist, you choose not to be average.
12. By being a narcissist, you simply accept that you deserve the best.
13. People high in narcissism are not likely to have many friends.
14. Being high in narcissism helps people to succeed in life.

Syrian Refugee Article

Please take your time reading the article on the following page. After reading you will be asked a variety of questions based on the content and your comprehension of the article, so it is important to pay attention to the information outlined in the article.

The submit button will be disabled for 40 seconds to ensure your concentration, but feel free to take as much time as you need to finish reading the article. The submit button will be disabled for 40 seconds to ensure your concentration, but feel free to take as much time as you need to finish reading the article.

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How is the Refugee Crisis Affecting Canada?









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Kevin Bissett, The Canadian Press
Published Thursday, December 17, 2015 5:08PM EST
Last Updated Thursday, December 17, 2015 10:09PM EST

OTTAWA — Somewhere right now, in a refugee camp in Amman or a rental apartment in Beirut or on a street in Istanbul, sits a Syrian hoping to be among the 25,000 people resettled to Canada, sometime in the next few months.

About 250,000 new immigrants arrive in Canada each year. This is roughly double our country's natural growth through births and deaths. On a per capita basis, Canada accepts about twice as many immigrants as the United States, and about four times as many as Japan.

One subset of immigrants includes refugees. There are more than 4 million Syrian refugees currently in need of resettlement. The Canadian government has promised to accept 25,000 government-sponsored Syrian refugees to Canada in the next two months. For some perspective on the scale of this number, in 2014 the Canadian government took in a total of just 7,573 government-assisted refugees.

"Rumours are already circulating in the refugee populations that there's a large program, that Canadians are coming," said Furio De Angelis, the Canadian representative of the UN High Commissioner for Refugees.

One issue that arises with the speed at which the government has proposed to implement this increase in refugees is ensuring an efficient but secure screening process. The current process takes months, if not years, to screen and select which refugees will come to Canada. With the proposed two month timeline, this process will have to undergo drastic changes, creating significant security concerns. Guidy Mamann, an immigration lawyer based in Toronto explains, "The agencies that are typically tasked with security functions are now going to be scrambling," he added, "the ongoing conflict and the fact that many refugees have lost basic documents, makes background checks extra-challenging, if not impossible, on a deadline."

Given the speed with which the Trudeau government has pledged to act on bringing Syrian refugees to Canada, many aid workers are hopeful there will be changes in the future that will make it easier for refugees to make their way to Canada.

"It demonstrates that this movement of refugees can happen quickly. It doesn't have to happen with this slow process that's going on now. It needs to be treated as a rescuing program and not as just another slice of our immigration pie," explains Tom Denton, executive director of administration and sponsorship for Hospitality House Refugee Ministry.

While the Liberal plan is focused on the logistics of how to get refugees to Canada now, they are also thinking about the future.

Immigration Minister John McCallum highlighted this week that one member of the committee pulling together the plan is Minister of Democratic Institutions Maryam Monsef.

"She is a minister who is actually a refugee herself," McCallum said. "We talked about the fact that 20 years from now we may have one of the Syrian refugees sitting around the cabinet table."

"That speaks to the kind of vision we have in this plan."









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1. Summarize the main idea of the article in 1-2 sentences in your own words.

2. How has the government of Canada promised to help with the Syrian refugee crisis?

Do the following statements agree with the information in the article? Select:

True if the statement agrees with the article

False if the statement does not agree with the article

a. There are more than 4 million Syrian refugees currently in need of resettlement.

True/False

b. There may be significant security concerns with accepting the proposed amount of refugees in a time frame of two months.

True/False

c. The current Minister of Democratic Institutions, Maryam Monsef, came to Canada as a refugee.

True/False

Political Beliefs

Please indicate the degree to which you agree or disagree with the following statements.

Strongly Disagree				Neither Agree or Disagree				Strongly Agree
1	2	3	4	5	6	7	8	9

1. The recent shift from a Conservative federal government to a Liberal federal government is a positive change for Canada
2. The Liberal government should look into reforming immigration policies
3. I am not confident that Prime Minister Justin Trudeau has adequate experience for his position
4. The Conservative government would have a better strategy for dealing with the current issues facing the government
5. The Liberal government has laid out a reasonable plan to assist with the Syrian refugee crisis

Please indicate the degree to which you feel the following emotions towards the Liberal government.

No hatred at all	0	1	2	3	4	5	6	7	8	9	Extreme hatred
No hostility at all	0	1	2	3	4	5	6	7	8	9	Extreme hostility
*No admiration at all	0	1	2	3	4	5	6	7	8	9	Extreme admiration
No disliking at all	0	1	2	3	4	5	6	7	8	9	Extreme disliking
*No acceptance at all	0	1	2	3	4	5	6	7	8	9	Extreme acceptance
No superiority at all	0	1	2	3	4	5	6	7	8	9	Extreme superiority
*No affection at all	0	1	2	3	4	5	6	7	8	9	Extreme affection
No disdain at all	0	1	2	3	4	5	6	7	8	9	Extreme disdain
*No approval at all	0	1	2	3	4	5	6	7	8	9	Extreme approval
*No sympathy at all	0	1	2	3	4	5	6	7	8	9	Extreme sympathy
No rejection at all	0	1	2	3	4	5	6	7	8	9	Extreme rejection
*No warmth at all	0	1	2	3	4	5	6	7	8	9	Extreme warmth

Prejudiced Attitudes Survey (Stephan & Stephan, 1993)

Please indicate the degree to which you feel the following emotions towards Syrian refugees

No hatred at all	0	1	2	3	4	5	6	7	8	9	Extreme hatred
No hostility at all	0	1	2	3	4	5	6	7	8	9	Extreme hostility
*No admiration at all	0	1	2	3	4	5	6	7	8	9	Extreme admiration
No disliking at all	0	1	2	3	4	5	6	7	8	9	Extreme disliking
*No acceptance at all	0	1	2	3	4	5	6	7	8	9	Extreme acceptance
No superiority at all	0	1	2	3	4	5	6	7	8	9	Extreme superiority
*No affection at all	0	1	2	3	4	5	6	7	8	9	Extreme affection
No disdain at all	0	1	2	3	4	5	6	7	8	9	Extreme disdain

- *No approval at all 0 1 2 3 4 5 6 7 8 9 Extreme approval
- *No sympathy at all 0 1 2 3 4 5 6 7 8 9 Extreme sympathy
- No rejection at all 0 1 2 3 4 5 6 7 8 9 Extreme rejection
- *No warmth at all 0 1 2 3 4 5 6 7 8 9 Extreme warmth

Symbolic Threat (Stephan et al., 1999)

Please indicate the degree to which you agree or disagree with the following statements in regards to Syrian refugees

Strongly Disagree									Strongly Agree
1	2	3	4	5	6	7	8	8	10

1. Syrian refugees should learn to conform to the rules and norms of Canadian society as soon as possible after they arrive.
2. Refugees from Syria will undermine Canadian culture.
3. The values and beliefs of Syrian refugees regarding work are basically quite similar to those of most Canadians.
4. The values and beliefs of Syrian refugees regarding moral and religious issues are *not* compatible with the beliefs and values of most Canadians.
5. The values and beliefs of Syrian refugees regarding family issues and socializing children are basically quite similar to those of most Canadians.
6. The values and beliefs of Syrian refugees regarding social relations are *not* compatible with the beliefs and values of most Canadians.
7. Syrian refugees should *not* have to accept Canadian ways.

Realistic Threat (Stephan et al., 1999)

Please indicate the degree to which you agree or disagree with the following statements in regards to Syrian refugees

Strongly Disagree									Strongly Agree
1	2	3	4	5	6	7	8	8	10

8. Syrian refugees get more from Canada than they contribute.

- *9. The children of Syrian refugees should have the same right to attend public schools in Canada as Canadians do.
- 10. Syrian refugees will increase the tax burden on Canadians.
- *11. Syrian refugees will *not* displace Canadian workers from their jobs.
- *12. Syrian refugees should be eligible for the same health-care benefits received by Canadians.
- 13. Social services will become less available to Canadians because of Syrian refugees.
- *14. The quality of social services available to Canadians will remain the same, despite Syrian refugees.
- *15. Syrian refugees are as entitled to subsidized housing or subsidized utilities (water, sewage, electricity) as poor Canadians are.

Intergroup Anxiety (Stephan & Stephan, 1985)

How would you feel when interacting with Syrian refugees?

Not at all									Extremely
1	2	3	4	5	6	7	8	8	10

- 1. Apprehensive
- 2. Uncertain
- 3. Worried
- 4. Awkward
- 5. Anxious
- 6. Threatened
- 7. Comfortable
- 8. Trusting
- 9. Friendly
- 10. Confident
- 11. Safe
- 12. At ease

Demographics

Please answer the following demographic questions:

- 1. Age: _____
- 2. Gender (select one):
 - a) Male
 - b) Female
 - c) Other
- 3. Which of the following BEST describes your ethnic background?
 - a) Aboriginal/First Nations/Metis



- b) White/European
- c) Black/African/Caribbean
- d) Southeast Asian (e.g., Chinese, Japanese, Korean, Vietnamese, Cambodian, Filipino, etc.)
- e) Arab (Saudi Arabian, Palestinian, Iraqi, etc.)
- f) South Asian (East Indian, Sri Lankan, etc.)
- g) Latin American (Costa Rican, Guatemalan, Brazilian, Columbian, etc.)
- h) West Asian (Iranian, Afghani, etc.)
- i) Other (please specify) _____

4. Are you a Canadian citizen?

Yes/No

5. Are you or your family recent Canadian immigrants (i.e. first or second generation Canadian)?

Yes/No

Appendix C – Study 3 Materials

The Reasoning and Verbal Acuity Battery (RVAB; Fein & Spencer, 1997).

Instruction Page 1a:

The Reasoning and Verbal Acuity Battery is designed to test one's ability to reason and to be proficient in the use, comprehension and application of verbal skills. Reasoning effectively in a verbal medium depends primarily upon the ability to discern, comprehend and analyze the relationships among words or groups of words and short sentences. Each of the following problem types focuses on a particular set of verbal and reasoning skills. When taken together, they provide a comprehensive sample indicative of overall proficiency in reasoning, manipulation and navigation of the English language. The Reasoning and Verbal Acuity Battery has been validated in numerous studies throughout the United States and Canada over the last five years.

The battery consists of the following sets of problems: Analogies, Antonyms, Sentence Completion, and Verbal-Nonverbal Matching. Each set will consist of 5 to 10 problems.

Instruction Page 1b:

The Reasoning and Verbal Acuity Battery (RVAB) is designed to test one's ability to reason and to be proficient in the use, comprehension and application of verbal skills. Reasoning effectively in a verbal medium depends primarily upon the ability to discern, comprehend and analyze the relationships among words or groups of words and short sentences. Each of the following problem types focuses on a particular set of verbal and reasoning skills. After beginning this study we detected problems with how the RVAB was recording data. New research has also been published suggesting that the test includes questions that are overly difficult for most populations. We will be asking for your feedback on the questions at the end of the study. Therefore we ask that you read the content of the questions without trying to solve the problems. After reading the content, please select the first answer option given for each question.

The battery consists of the following sets of problems: Analogies, Antonyms, Sentence Completion, and Verbal-Nonverbal Matching. Each set will consist of 5 to 10 problems.

Instruction Page 2:

Your test performance will be compared with the results from previous studies involving:

Students at inclusive 3- or 4-year colleges or universities

Analogies Instructions Page 1:

Analogies

Analogy questions test the ability to recognize the relationship that exists between the words in a word pair and to recognize when two word pairs display parallel relationships. To answer an analogy question, one must formulate the relationship between the words in the given word pair and then must identify the answer choice containing words that are related to one another in most nearly the same way.

You will have 15 seconds for each question.

Click continue to begin the Analogies section.

Analogy Question 1:

Click the number beside the correct answer

SEDATIVE: DROWSINESS:

1. epidemic: contagious
2. vaccine: virus
3. laxative: drug
4. anesthetic: numbness
5. therapy: psychosis

Analogy Question 2:

Click the number beside the correct answer

LAWYER: COURTROOM:

1. participant: team
2. commuter: train
3. student: classroom
4. senator: caucus
5. patient: ward

Analogy Question 3:

Click the number beside the correct answer

CURIOSITY: KNOW:

1. temptation: conquer

2. starvation: food
3. wanderlust: travel
4. humor: laugh
5. survival: line

Analogy Question 4:

Click the number beside the correct answer

UPBRAID: REPROACH:

1. dote: like
2. lag: stray
3. vex: please
4. earn: desire
5. recast: explain

Analogy Question 5:

Click the number beside the correct answer

WORSHIP: SACRIFICE:

1. generation: pyre
2. burial: mortuary
3. weapon: centurion
4. massacre: invasion
5. prediction: augury

Analogy Instructions Page 2:

Please wait a few seconds... while your scores are calculated...

Antonym Instructions Page 1:

Antonyms

Although antonym questions test knowledge of vocabulary more directly than do any of the other verbal question types, the purpose of the antonym questions is to measure not merely the strength of one's vocabulary but also the ability to reason from a given concept to its opposite. Antonyms may require only rather general knowledge of a word, or they may require one to make fine distinctions among answer choices.

You will have 15 seconds for each one.

Click continue to begin the Antonyms section.

Antonym Question 1:

Click the number beside the correct answer

BOYCOTT:

1. extort
2. underwrite
3. underbid
4. stipulate
5. patronize

Antonym Question 2:

Click the number beside the correct answer

ADULTERATION:

1. consternation
2. purification
3. normalization
4. approximation
5. rejuvenation

Antonym Question 3:

Click the number beside the correct answer

DEPOSITION:

1. process of congealing
2. process of distilling
3. process of eroding
4. process of evolving
5. process of condensing

Antonym Question 4:

Click the number beside the correct answer

ENERVATE:

1. recuperate
2. resurrect
3. renovate
4. gather
5. strengthen

Antonym Question 5:

Click the number beside the correct answer

LOQUACIOUS:

1. tranquil
2. skeptical
3. morose
4. taciturn
5. witty

Antonym Question 6:

Click the number beside the correct answer

REPINE:

1. intensify
2. excuse
3. express joy
4. feel sure
5. rush forward

Antonym Question 7:

Click the number beside the correct answer

VENERATION:

1. derision
2. blame
3. avoidance
4. ostracism
5. defiance

Antonym Question 8:

Click the number beside the correct answer

INVETERATE:

1. casual
2. public
3. satisfactory
4. trustworthy
5. sophisticated

Antonym Instructions Page 2:

Please wait a few seconds... while your scores are calculated...

Sentence Completions Instructions Page 1:

Sentence Completions

Sentence completion questions provide a context within which to analyze the function of words as they relate to and combine with one another to form a meaningful unit of discourse. These questions measure the ability to recognize words or phrases that both logically and stylistically complete the meaning of a sentence. In deciding which of five words or sets of words can best be substituted for blank spaces in a sentence, one must analyze the relationships among the component parts of the incomplete sentence. One must consider each answer choice and decide which completes the sentence in such a way that the sentence has a logically satisfying meaning and can be read as a stylistically integrated whole.

You will have 20 seconds for each one.

Click continue to begin the Sentence Completions section.

Sentence Completions Question 1:

Click the number beside the correct answer

Since 1813 reaction to Jane Austin's novel has oscillated between _____ and condescension; but in general later writers have esteemed her works more highly than did most of her literary _____.

1. dismissal... admirers
2. adoration... contemporaries
3. disapproval... readers
4. indifference... followers

5. approbation... precursors

Sentence Completions Question 2:

Click the number beside the correct answer

There are, as yet, no vegetation types or ecosystems whose study has been _____ to the extent that they no longer _____ ecologists.

1. perfected... hinder
2. prolonged... require
3. delayed... benefit
4. exhausted... interest
5. prevented... challenge

Sentence Completions Question 3:

Click the number beside the correct answer

It was her view that the country's problems had been _____ by foreign technocrats, so that to invite them to come back would be counterproductive.

1. foreseen
2. attacked
3. ascertained
4. exacerbated
5. analyzed

Sentence Completions Question 4:

Click the number beside the correct answer

Winsor McCay, the cartoonist, could draw with incredible _____: his comic strip about Little Nemo was characterized by marvelous draftsmanship and sequencing.

1. sincerity
2. efficiency
3. virtuosity
4. rapidity
5. energy

Sentence Completions Question 5:

Click the number beside the correct answer

The actual _____ of Wilson's position was always _____ by his refusal to compromise after having initially agreed to negotiate a settlement.

1. outcome... foreshadowed
2. logic... enhanced
3. rigidity... betrayed
4. uncertainty... alleviated
5. cowardice... highlighted

Sentence Completions Question 6:

Click the number beside the correct answer

The senator's reputation, though _____ by false allegations of misconduct, emerged from the ordeal _____.

1. reduced... unscathed
2. destroyed... intact
3. damaged... impaired
4. impugned... unclear
5. tarnished... sullied

Sentence Completions Instructions Page 2:

Please wait a few seconds... while your scores are calculated...

Syllogisms Instructions Page 1:

Syllogisms

The purpose of the syllogism questions is to measure the ability to understand the logical relationships between phrases in order to derive deductively the implications of their juxtaposition. As syllogisms reflect the most common and basic structure of an argument, the ability to discern the vital points of a premise is necessary to engage in critical evaluation as well as original formulation of an argument. A conclusion is valid when it follows logically from the premises and brings to the equation no new information. In judging the validity of the possible conclusions, keep in mind that some choices reflect more complete, inclusive answers than others. That is, two conclusions may be valid, but one may be more complete and inclusive than the other. Of these, you should choose the more complete and inclusive conclusion.

Syllogisms Instructions Page 2:

Keep in mind that you are not to base your answers on how true a conclusion seems to be, but rather how valid it is given the premises. That is, you should think about which third sentence is most complete and true under the assumption that the premises are true.

You will have 20 seconds for each one. For each problem, choose the third sentence that would yield the most valid and complete conclusion given the premises, which are stated in the previous two sentences, or indicate that none of the conclusions is valid.

Click continue to begin the Syllogisms section.

Syllogism Question 1:

Click the number beside the correct answer

Some artists are beekeepers.
All beekeepers are chemists.

1. Some artists are not chemists.
2. Some artists are chemists.
3. No chemists are artists.
4. None of these conclusions is valid.

Syllogism Question 2:

Click the number beside the correct answer

No addictive things are inexpensive.
Some cigarettes are inexpensive.

1. Cigarettes are addictive.
2. Some cigarettes are addictive.
3. Cigarettes are not addictive.
4. None of these conclusions is valid.

Syllogism Question 3:

Click the number beside the correct answer

All Russians are communists.
Some communists are undemocratic.

1. Some Russians are undemocratic.
2. All Russians are undemocratic.
3. Some undemocratic people are not Russian.

4. None of these conclusions is valid.

Syllogism Question 4:

Click the number beside the correct answer

All firefighters are collectors.
Some dogcatchers are not collectors.

1. Some dogcatchers are firefighters.
2. No dogcatchers are firefighters.
3. All firefighters are dogcatchers.
4. None of these conclusions is valid.

Syllogism Question 5:

Click the number beside the correct answer

No millionaires are hardworkers.
Some rich people are hardworkers.

1. Some millionaires are not rich people.
2. No millionaires are rich people.
3. All millionaires are rich people.
4. None of these conclusions is valid.

Syllogism Question 6:

Click the number beside the correct answer

Some police dogs are vicious.
Some highly trained dogs are not vicious.

1. All police dogs are highly trained.
2. Some highly trained dogs are not police dogs.
3. No highly trained dogs are police dogs.
4. None of these conclusions is valid.

Syllogisms Instructions Page 3:

Please wait a few seconds... while your scores are calculated...

Verbal-Nonverbal Matching Instructions Page 1:

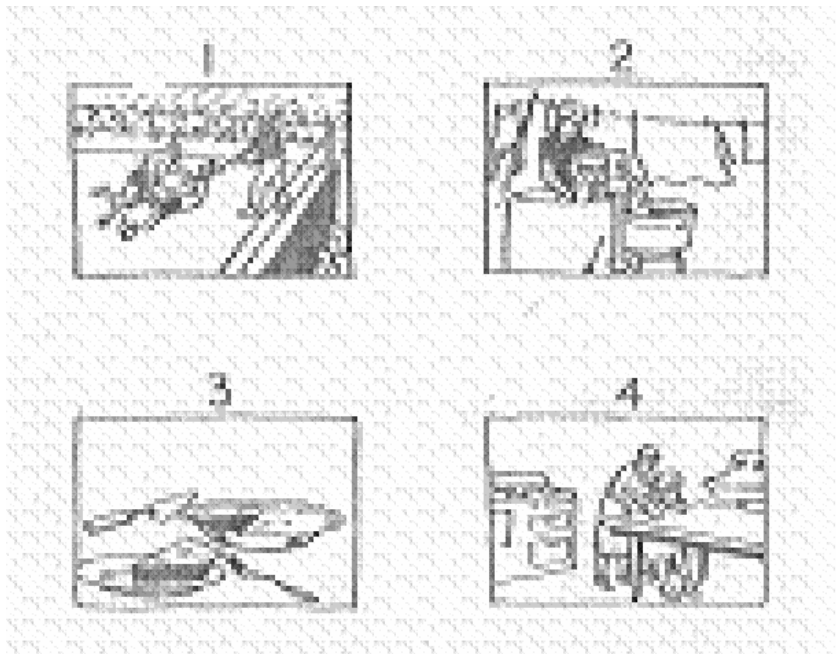
The Verbal-Nonverbal Matching test has been found to be a good indicator of people's verbal ability and the extent to which they can apply their verbal skills to nonverbal domains. By examining the application of verbal skills to a nonverbal domain, this test is a particularly good measure of overall verbal skills, rather than just vocabulary.

For each one of the words to follow, choose the picture that provides the best match.

You will have 10 seconds for each one.

Click continue to begin the Verbal-Nonverbal Matching section.

**Participants are shown the following image with each Verbal-Nonverbal Matching question.*



Verbal-Nonverbal Matching Question 1:

Click the number corresponding to the correct answer

RUCTION

Verbal-Nonverbal Matching Question 2:

Click the number corresponding to the correct answer

FORLORN

Verbal-Nonverbal Matching Question 3:

Click the number corresponding to the correct answer

INGUINAL

Verbal-Nonverbal Matching Question 4:

Click the number corresponding to the correct answer

ROTARY

Verbal-Nonverbal Matching Question 5:

Click the number corresponding to the correct answer

FOMENT

Verbal-Nonverbal Matching Question 6:

Click the number corresponding to the correct answer

JETS

Verbal-Nonverbal Matching Question 7:

Click the number corresponding to the correct answer

MAUDLIN

Verbal-Nonverbal Matching Question 8:

Click the number corresponding to the correct answer

BELLICOSE

Verbal-Nonverbal Matching Question 9:

Click the number corresponding to the correct answer

DISCONSOLATE

Verbal-Nonverbal Matching Question 10:

Click the number corresponding to the correct answer

COMESTIBLE

Verbal-Nonverbal Matching Instructions Page 2:

Please wait a few seconds... while your scores are calculated...

Feedback

Among your peer group, your percentile rankings for each of the tests within the Reasoning and Verbal Acuity Battery are:

Analogies: 51st percentile

Antonyms: 54th percentile

Sentence Completions: 56th percentile

Syllogisms: 33rd percentile

Verbal-Nonverbal Matching: 38th percentile