

Power motivations and risk sensitivity and tolerance.

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Abstract

One or two sentences providing a **basic introduction** to the field, comprehensible to a scientist in any discipline.

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1 Introduction

Throughout political history, tyrants, and despots have influenced great power over large swaths of land and communities. One common thread amongst these individuals is how they wield their great power, often through dominant tactics such as threats and political subversion. Recent history has shown with individuals like Donald Trump, Kim Jong-Un, and Rodrigo Duterte who display authoritarian traits often wield their power through fear and threats of violence (Bernstein, 2020; “Glamorizing Dictators,” 2018; Kirby, 2021). How this power is wielded is often different for each individual. Some individuals such as Duterte and Bolsonaro wielded their power more dramatically than the likes of Trump. Individuals wielding power need not be tyrants such as the former. Individuals like Angela Merkel used her position and leadership skills to be a world leader in most negotiations. While individuals more well known for their status demonstrated their power through prestige motives. To better understand how individuals such as world leaders or opinion makers gain and wield their power over others. Research in this field is often difficult to research yet strides have

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24 been made to understand power, namely through research in moral judgment and
 25 decision-making such as power orientation.

26 **1.1 Dominance, Prestige, and Leadership orientation**

27 Research in power desire motives has focused on three subdomains: dom-
 28 inance, leadership, and prestige (Suessenbach et al., 2019). Each of these three
 29 different power motives is explained as to different ways or methods that individ-
 30 uals in power sought power or were bestowed upon them. Often these dominant
 31 individuals will wield their power with force and potentially cause risk to them-
 32 selves to hold onto that power. @

33 **1.1.1 Dominance**

34 The dominance motive is one of the more researched methods and well-
 35 depicted power motives. Individuals with a dominant orientation display the
 36 more primal of human behavior. These individuals will seek power through di-
 37 rect methods such as asserting dominance, control over resources, or physically
 38 assaulting someone (M. W. Johnson & Bruner, 2012; Winter, 1993). Early re-
 39 search in dominance motives has shown that acts of dominance ranging from
 40 asserting physical dominance over another to physical displays of violence have
 41 been shown in many mammalian species, including humans (Petersen et al., 2018;
 42 Rosenthal et al., 2012).

43 Individuals high in dominance are often high in Machiavellianism, and
 44 narcissism, and often are prone to risky behavior (discussion further in the next
 45 section). Continued research has hinted at a possible tendency for males to
 46 display these dominant seeking traits more than females (Bareket & Shnabel,
 47 2020; Sidanius et al., 2000). When high dominance individuals assert themselves
 48 they are doing so to increase their sense of power (Anderson et al., 2012; Bierstedt,
 49 1950). Asserting one's sense of dominance over another can be a dangerous task.
 50 In the animal kingdom, it can often lead to injury. While, humans asserting
 51 dominance can take a multitude of actions such as leering behaviors, physical
 52 distance, or other non-verbal methods to display dominance (Petersen et al.,
 53 2018; Witkower et al., 2020). Power from a dominant perspective is not always
 54 bestowed upon someone. Often, high dominance individuals will take control and
 55 hold onto it.

56 **1.1.2 Prestige**

57 Contrary to the dominant motivation of using intimidation and aggression
 58 to gain more power, a prestige motivation or prestige, in general, is bestowed

59 upon an individual from others in the community (Maner & Case, 2016;
 60 Suessenbach et al., 2019). Different from the dominance motivation, a prestige
 61 motivation is generally unique to the human species (Maner & Case, 2016).
 62 Due in part to ancestral human groups being smaller hunter-gatherer societies,
 63 individuals that displayed and used important behaviors beneficial to the larger
 64 group were often valued and admired by the group. Therein, the social group
 65 bestows the authority onto the individual. Generally, this type of behavior
 66 can be passively achieved by the prestigious individual. However, this does
 67 not remove the intent of the actor in that they too can see prestige from the
 68 group, but the method of achieving that social status greatly differs from that of
 69 dominance-seeking individuals.

70
 71 Apart from dominance-motivated individuals that continually have to fight
 72 for their right to have power over others, individuals that seek or were given
 73 power through a prestige motivation are not generally challenged in the same
 74 sense as dominant individuals. Displaying behaviors that the community would
 75 see as beneficial would endear them to the community making the survival of the
 76 community as a whole better (Maner & Case, 2016). Evolutionarily this would
 77 increase the viability of the prestigious individual and their genes. Similar to
 78 the dominance perspective, the prestige perspective overall increases the power
 79 and future survivability of the individual. However, due to the natural difference
 80 between prestige and dominance, dominance-seeking individuals are challenged
 81 more often resulting in more danger to their position (M. W. Johnson & Bruner,
 82 2012).

83 **1.1.3 Leadership**

84 With a shared goal a leader is someone that takes initiative and attracts
 85 followers for that shared goal (Van Vugt, 2006). Leadership is an interesting
 86 aspect of behavior in that it is almost exclusive to human interaction. Dis-
 87 cussions by evolutionary psychologists point to the formation of early human
 88 hunter-gatherer groups where the close interconnectedness created a breeding
 89 ground for leadership roles. As early humans began to evolve it would become
 90 advantageous for individuals to work together for a common goal (King et
 91 al., 2009). Often, individuals with more knowledge of a given problem would
 92 demonstrate leadership and take charge or be given power. Multiple explanations
 93 of the evolution of leadership exist such as coordination strategies, and safety,
 94 along with evidence for growth in social intelligence in humans (King et al.,
 95 2009; Van Vugt, 2006).

96

97 An interesting aspect of leadership motivation is the verification of the
 98 qualities of the leader by the communities. Individuals that are often put into
 99 leadership roles or take a leadership role often display the necessary goals, qual-
 100 ities, and knowledge to accomplish the shared/stated goal. However, this is not
 101 always the case, especially for those charismatic leaders who could stay on as a
 102 leader longer than the stated goal requires (Vugt & Ronay, 2014). Traditionally,
 103 leadership was thought to be fluid in that those with the necessary knowledge at
 104 the time would be judged and appointed as the leader. However, these charis-
 105 matic leaders use their charisma, uniqueness, nerve, and talent to hold onto their
 106 status.

107 **1.2 Risk**

108 Every time people leave the relative safety of their home, every decision
 109 they make they are taking some form of risk. Financial risk is often discussed
 110 in the media usually concerning the stock market. However, the risk is not
 111 just present in finances but also in social interactions such as social risk, sexual
 112 risk, health, and safety risk, recreational, and ethical risks (Breakwell, 2007;
 113 Kühberger & Tanner, 2009; Shearer et al., 2005; Weber et al., 2002). Each
 114 individual is different in their likelihood and perception of participating in those
 115 risks. Some will be more inclined to be more financially risky while others would
 116 risk their health and safety.

117
 118 Whether to engage in a risky situation is very complex depending on a
 119 cost-benefit analysis (P. S. Johnson et al., 2015). Do the positives outweigh
 120 the negatives? In practice, not all individuals will do a cost-benefit analysis of
 121 a risky situation. Often, the timing of an event makes such an analysis dis-
 122 advantageous. The benefits are often relative to the individual decision-maker.
 123 Differences emerge in the general likelihood to engage in risky behavior such that
 124 males tend to be more likely to engage in risky behaviors than their female coun-
 125 terparts (Chen & John, 2021; Desiderato & Crawford, 1995). Women tended to
 126 avoid risky situations except for social risks.

127 **1.3 The Present Studies**

128 The present study sought to further our understanding of dominance, pres-
 129 tige, and leadership motivations in human decision-making. Furthering this, we
 130 seek to bridge the connection between risk-taking behaviors, from diverse do-
 131 mains, and the dominance, prestige, and leadership orientations. Following the
 132 literature, we predicted that participants that were high in dominance orientation

would be more likely to not only engage in risky behaviors but praise the benefits of participating in those behaviors. Individuals with prestige or leadership orientation.

2 Experiment 1

2.1 Methods

Participants were a convenience sample of 111 individuals from Prolific Academic’s crowdsourcing platform (www.prolific.io). Prolific Academic is an online crowdsourcing service that provides participants access to studies hosted on third-party websites. Participants were required to be 18 years of age or older and be able to read and understand English. Participants received £4.00, which is above the current minimum wage pro-rata in the United Kingdom, as compensation for completing the survey. The Psychology Research Ethics Committee at the University of Edinburgh approved all study procedures [ref: 212-2021/1]. The present study was pre-registered along with a copy of anonymized data along with a copy of the R code and supplemental materials are available at (<https://osf.io/s4j7y>).

2.2 Materials

2.2.1 Demographic Questionnaire

In a demographic questionnaire administered prior to the main survey, participants were invited to respond to a series of questions about their self-identified demographic characteristics such as age, gender, ethnicity, and ethnic origin.

2.2.2 Dominance, Prestige, and Leadership Orientation

The 18-item Dominance, Prestige, and Leadership scale, DoPL (Suessenbach et al., 2019), is used to measure dominance, prestige, and leadership orientation. Each question corresponds to one of the three domains. Each domain is scored across six unique items related to those domains (e.g., “I relish opportunities in which I can lead others” for leadership) and rated on a scale from 0 (Strongly disagree) to 5 (Strongly agree). Included in this scale are 15 masking questions obtained from the unified motives scale (Schönbrodt & Gerstenberg, 2012) consistency reliability for the current sample is $\alpha = 0.86$.

2.2.3 Domain Specific Risk-taking Scale

The 40-item Domain-Specific Risk-taking Scale, DOSPERT (Weber et al., 2002) is a scale assessing individuals’ likelihood of engaging in risky behaviors

167 within 5 domain-specific risky situations: financial (“Gambling a week’s income
 168 at a casino.”), social (“Admitting that your tastes are different from those of your
 169 friends”), recreational (“Trying out bungee jumping at least once”), health and
 170 safety (“Engaging in unprotected sex”), and ethical (“Cheating on an exam”)
 171 situations. Each risky situation is then rated on a five-point Likert scale (1 being
 172 very unlikely and 5 being very likely). Two additional five-point Likert scales
 173 assess risk perception and expected benefits (1 being not at all risky and 5 being
 174 extremely risky; 1 being no benefits at all and 5 being great benefits) respectively.
 175 Example risky situations are “Admitting that your tastes are different from those
 176 of a friend” and “Drinking heavily at a social function.” Internal consistency
 177 reliability for the current samples for the 3 sub-domains are $\alpha = 0.85$, $\alpha = 0.90$,
 178 $\alpha = 0.92$ respectively.

179 2.3 Procedure

180 Participants were recruited via a study landing page on Prolific’s web-
 181 site or via a direct e-mail to eligible participants (Prolific Academic, 2018). The
 182 study landing page included a brief description of the study including any risks
 183 and benefits along with expected compensation for successful completion. Par-
 184 ticipants accepted participation in the experiment and were directed to the main
 185 survey (Qualtrics, Inc; Provo, UT) where they were shown a brief message on
 186 study consent.

187 Once participants consented to participate in the experiment they an-
 188 swered a series of demographic questions. Once completed, participants com-
 189 pleted the Dominance, Prestige, and Leadership Scale and the Domain Specific
 190 Risk-taking scale. The two scales were counterbalanced to account for order ef-
 191 fects. After completion of the main survey, participants were shown a debriefing
 192 statement that briefly mentions the purpose of the experiment along with the
 193 contact information of the main researcher (AI). Participants were compensated
 194 £4.00 via Prolific Academic.

195 2.4 Data analysis

196 Demographic characteristics were analyzed using multiple regression for
 197 continuous variables (age) and Chi-square tests for categorical variables (gender,
 198 race, ethnicity, ethnic origin, and education). Means and standard deviations
 199 were calculated for the relevant scales (i.e., DoPL and DOSPERT). All analyses
 200 were done using (R Core Team, 2021) along with the (Bürkner, 2017) package.

201 The use of bayesian statistics has a multitude of benefits to statistical anal-
 202 ysis and research design. One important benefit is the use of prior data in future

analyses. Termed as priors, is the use of prior distributions for future analysis. This allows for the separation of how the data might have been collected or what the intention was. In essence, the data is the data without the interpretation of the scientist.

All relevant analyses were conducted in a Bayesian framework using the brms package (Bürkner, 2018) along with the cmdstanr packages notes (Gabry & Cesnovar, 2021). In addition to the aforementioned packages, we used bayestestR, rstan, and papaja (Aust & Barth, 2020; Makowski et al., 2019; Stan Development Team, 2020).

2.5 Results

One hundred and eleven individuals completed the main survey. Of these individuals, 111 completed all sections without incomplete data and were therefore retained in most data analyses. In later analyses to account for outliers, two participants had to be excluded from the dataset. Table 1 shows the demographic information for the participants. The average completion time for participants was 20M 58s ($SD = 10M\ 43s$).

2.5.1 Preregistered Analyses

We first investigated DoPL orientation on general risk preference (Figure 1). General risk preference was anecdotally explained by dominance orientation, participant gender, and participant age (see table 2).

2.5.1.1 Demographic and DoPL. All participants completed the dominance, leadership, and prestige scale (Suessenbach et al., 2019). Empirically, men have generally been more dominance-oriented in their behavior (Rosenthal et al., 2012). Following the literature, men tended to be more dominance oriented than women. The marginal posterior distribution of each parameter is summarized in Table #. Interestingly, older individuals tended to be more dominance-oriented than younger individuals.

2.5.1.2 General Risk and DoPL. Further investigations, as previously mentioned investigated DoPL's interactions with general risk preference. As stated, dominance appears to be the strongest predictor of general risk preference (95% CI $b = 3$, [1.07, 4.9]). Overall, younger individuals tended to have a stronger preference for risk (95% CI $b = -2.85$, [-4.76, -0.95]). Those that tended to be lower in leadership orientation had a tendency to be generally more risk averse than their counterparts (95% CI $b = -1.91$, [-3.82, -0.02]). Following the literature as well, dominant men tended to prefer risk more so than women (95% CI $b = -3.02$, [-4.97, -1.06]).

2.5.2 *Domain-Specific Risk-Taking*

As predicted individuals that identified as male were more likely to endorse risk-taking behaviors, namely ethical, social, financial, and recreational domains (see fig. ##).

2.5.3 *Interactions*

When investigating dominance, prestige, and leadership motivations with domain-specific risk-taking findings supported the common expectations in the literature. Table 5 shows the interactions with like CI values. Dominance overall explained the relationship between DoPL orientation and preference, specifically for ethical, financial, social, health and safety, and recreational preferences (95% CI $b = 1.15$, $[0.61, 1.71]$, $b = 0.87$, $[0.13, 1.58]$, $b = 1.81$, $[0.64, 2.94]$, $b = 1.09$, $[0.41, 1.77]$, and $b = 1.22$, $[0.67, 1.76]$) respectively. Full interactions can be found in table 4. Participant age and gender also appeared to affect recreational preference (95% CI $b = -1.14$, $[-1.83, -0.47]$, $b = 0.46$, $[0.05, 0.86]$) respectively.

Following these findings, we investigated the effect of DoPL on general risk preference and found that dominance overall predicted risk preference along with gender and age of the participant (Table 5).

2.5.4 *DOSPERS Sub-categorizations*

Risk preferences is generally made up of benefits and perceptions of risk. Outside of perceptions and benefits, dominance and males who are dominance oriented were the strongest predictors of likelihood in engaging in a risky situation (95% CI $b = 0.65$, $[0.36, 0.95]$ and $b = -0.48$, $[-0.85, -0.11]$). Dominance also appeared to be a strong predictor of perceiving more benefits of engaging in a risky situation (95% CI $b = 0.38$, $[0.07, 0.71]$) along with gender where males are more likely to perceive benefits (95% CI $b = -0.6$, $[-0.98, -0.22]$).

Alternatiively, prestige appeared to be a stronger predictor of perceiving risks than others along with female participants and female participants that are higher in leadership orientation (95% CI $b = 0.31$, $[0.01, 0.61]$, $b = 0.43$, $[0.05, 0.8]$, and $b = 0.43$, $[0.03, 0.82]$). Full predictors can be seen in table 5.

2.5.5 *Discussion*

3 Experiment 2

3.1 Methods

Materials remain the same in terms of the (1) Demographic Questionnaire, (2) Dominance, Prestige, and Leadership Questionnaire, and (3) DOSPERT

273 Questionnaire. However, we added the Brief-Pathological Narcissism Inventory to
274 assess possible interactions of dominance and narcissism in risky decision-making.

275 **3.2 Participants**

276 Following experiment 1, participants were a convenience sample of 279
277 individuals from Prolific Academic’s crowdsourcing platform (www.prolific.io).
278 Prolific Academic is an online crowdsourcing service that provides participants
279 access to studies hosted on third-party websites. Participants were required to
280 be 18 years of age or older and be able to read and understand English. In
281 addition, similar to participant demographics in experiment 1, participants were
282 majority white along with having a university undergraduate degree. Participants
283 received £3.00, which is above the current minimum wage pro-rata in the United
284 Kingdom, as compensation for completing the survey. The Psychology Research
285 Ethics Committee at the University of Edinburgh approved all study procedures
286 [ref: 212-2021/2]. The present study was pre-registered along with a copy of
287 anonymized data and a copy of the R code is available at (<https://osf.io/s4j7y>).

288 **3.3 Materials**

289 **3.3.1 Brief-Pathological Narcissism Inventory**

290 The 28-item Brief Pathological Narcissism Inventory (B-PNI; Schoenleber
291 et al. (2015)) is a modified scale of the original 52-item Pathological Narcissism
292 Inventory (PNI; Pincus et al. (2009)). Like the PNI, the B-PNI is a scale mea-
293 suring individuals’ pathological narcissism. Items in the B-PNI retained all 7
294 pathological narcissism facets from the original PNI (e.g., exploitativeness, self-
295 sacrificing self-enhancement, grandiose fantasy, contingent self-esteem, hiding the
296 self, devaluing, and entitlement rage). Each item is rated on a 5-point Likert scale
297 ranging from 1 (not at all like me) to 5 (very much like me). Example items in-
298 clude “I find it easy to manipulate people” and “I can read people like a book.”
299 B-PNI was well correlated within itself 0.90 along with strong internal consis-
300 tency within the sub-domains of pathological narcissism, i.e., Grandiosity (0.79)
301 and Vulnerability (0.89).

302 **3.4 Procedure**

303 Participants were recruited via a study landing page on Prolific’s website
304 or via a direct e-mail to eligible participants (Prolific Academic, 2018). The study
305 landing page included a brief description of the study including any risks and ben-
306 efits along with expected compensation for successful completion. Participants
307 accepted participation in the experiment and were directed to the main survey

on pavlovia.org (an online JavaScript hosting website similar to Qualtrics) where they were shown a brief message on study consent.

Once participants consented to participate in the experiment they answered a series of demographic questions. Once completed, participants completed the Dominance, Prestige, and Leadership Scale and the Domain Specific Risk-taking scale. An additional survey was added (the novel aspect of experiment 2) where participants, in addition to the two previous surveys, were asked to complete the brief-pathological narcissism inventory. The three scales were counterbalanced to account for order effects. After completion of the main survey, participants were shown a debriefing statement that briefly mentions the purpose of the experiment along with the contact information of the main researcher (AI). Participants were compensated £3.00 via Prolific Academic.

3.5 Data analysis

Demographic characteristics were analyzed using multiple regression for continuous variables (age) and Chi-square tests for categorical variables (gender, race, ethnicity, ethnic origin, and education). Means and standard deviations were calculated for the relevant scales (i.e., DoPL and DOSPERT). All analyses were done using (R Core Team, 2021) along with the (Bürkner, 2017) package.

The use of bayesian statistics has a multitude of benefits to statistical analysis and research design. One important benefit is the use of prior data in future analyses. Termed as priors, is the use of prior distributions for future analysis. This allows for the separation of how the data might have been collected or what the intention was. In essence, the data is the data without the interpretation of the scientist.

All relevant analyses were conducted in a Bayesian framework using the brms package (Bürkner, 2018) along with the cmdstanr packages notes (Gabry & Cesnovar, 2021). In addition to the aforementioned packages, we used bayestestR, rstan, and papaja for analysis along with the creation of this manuscript (Aust & Barth, 2020; Makowski et al., 2019; Stan Development Team, 2020).

3.6 Results and Discussion

Two hundred and eighty-nine individuals participated in the present experiment. Of those 54% identified as male ($n = 155$). Table 3 shows the demographic information for Experiment 2. Furthering, table 4 illustrates a Bayesian correlational matrix of all the measures wherein content-based similar measures illustrated positive and negative correlations consistent with expectations.

343 In general, male participants were more likely to endorse dominance-
 344 oriented statements, (95% CI $b = 0.27$, [0.03, 0.51]). Along with younger in-
 345 dividuals tending to also endorse dominant-oriented statements, (95% CI $b =$
 346 -0.02 , [-0.03, 0]).

347 **3.6.1 Preregistered Analyses**

348 **3.6.1.1 Dominance.** Following the previous basic results, we be-
 349 gan our pre-regisetered analysis found in the pre-registration found on OSF.io.
 350 Dominance-oriented individual was a strong predictor of multiple domains of risk-
 351 taking. Namely, participants that have a preference for both financial and social
 352 risk-taking, (95% CI $b = -0.19$, [-0.22, -0.16]) and (95% CI $b = -0.08$, [-0.38,
 353 0.21]) respectively. Investigating gender differences and found that males with a
 354 preference for financial risk-taking were more likely to endorse dominant-oriented
 355 statements, (95% CI $b = 0.1$, [0.02, 0.18]).

356 **3.6.1.2 Prestige.** Differentiating between DoPL domains, males
 357 with a preference for social risk-taking were more likely to endorse prestige-
 358 oriented statements along with individuals with a general preference for social
 359 risk-taking, (95% CI $b = 0.31$, [0.22, 0.4]) and (95% CI $b = -0.25$, [-0.28, -0.22]) re-
 360 spectively. Additionally, younger individuals tended to endorse prestige-oriented
 361 statements, (95% CI $b = -0.02$, [-0.03, -0.01]).

362 **3.6.1.3 Leadership.** Finally, leadership orientation follows a similar
 363 trend seen with dominance and prestige orientations. Males with a preference for
 364 social risk-taking were more likely to endorse leadership-oriented statements along
 365 with individuals with a less of a preference for recreational risk-taking endorsing
 366 leadership-oriented statements , (95% CI $b = 0.3$, [0.18, 0.42]) and (95% CI $b =$
 367 -0.15 , [-0.27, -0.03]) respectively.

368 **3.6.2 Brief-Pathological Narcissism Inventory**

369 We furthered our analyses, as seen in the pre-registration found on OSF.io
 370 by investigating pathological narcissism and its components through the Brief-
 371 Pathological Narcissism Inventory (B-PNI). Preliminary investigations of patho-
 372 logical narcissism in our sample show that younger individuals on average tended
 373 to present more narcissistic opinions (95% CI $b = -0.02$, [-0.03, -0.01]). The
 374 B-PNI further differentiates between grandiose and vulnerability. Interestingly,
 375 women tended to present more vulnerable narcissism traits than men (95% CI
 376 $b = -0.24$, [-0.45, -0.03]). Younger individuals tended to present more grandiose
 377 narcissism traits (95% CI $b = -0.01$, [-0.02, 0]). This same tendency for younger
 378 individuals was seen with vulnerable narcissism traits (95% CI $b = -0.02$, [-0.03,
 379 -0.01]).

Grandiose narcissism is then separated further into grandiose fantasy, exploitativeness, and self-sacrificing and self-enhancement. Selected findings are males tend to demonstrate more exploitativeness and younger individuals tended to present more exploitative and grandiose narcissism (95% CI $b = -0.01, [-0.03, 0]$) and (95% CI $b = -0.02, [-0.03, -0.01]$) respectively. Further analysis is shown in table 5.

3.6.3 *Risk and interactions*

Overall, anecdotally dominance appears to explain the overall individual perceptions, benefits, and likelihood of risk judgments (95% CI $b = -0.25, [-0.38, -0.11]$), (95% CI $b = 0.22, [0.09, 0.35]$), and (95% CI $b = 0.27, [0.13, 0.4]$) respectively. Similarly, when looking at further sub-categorizations of general risk preferences there does appear to be mainly a bias with regards to age, where younger individuals overall have a higher risk preference than their older counterparts.

3.6.4 *Domain-Specific Risk-Taking*

Looking at Domain Specific Risk-taking, we analyzed DOSPERT similarly to previous analyses. Overall, domain-specific risk-taking was explained by dominance orientation along with prestige and leadership. Interesting interactions were present with individual domains for narcissism as well.

Overall, Age was an effective predictor for both grandiose and vulnerable narcissism with younger individuals tending towards being more narcissistic for both grandiose and vulnerable traits (95% CI $b = -0.02, [-0.03, 0]$), and (95% CI $b = -0.03, [-0.04, -0.02]$) respectively. Preferences for financial and males with a recreational risk preference tended to express more vulnerable narcissism traits (95% CI $b = -0.27, [-0.47, -0.06]$) and (95% CI $b = -0.04, [-0.28, 0.21]$) respectively.

3.6.5 *Interactions*

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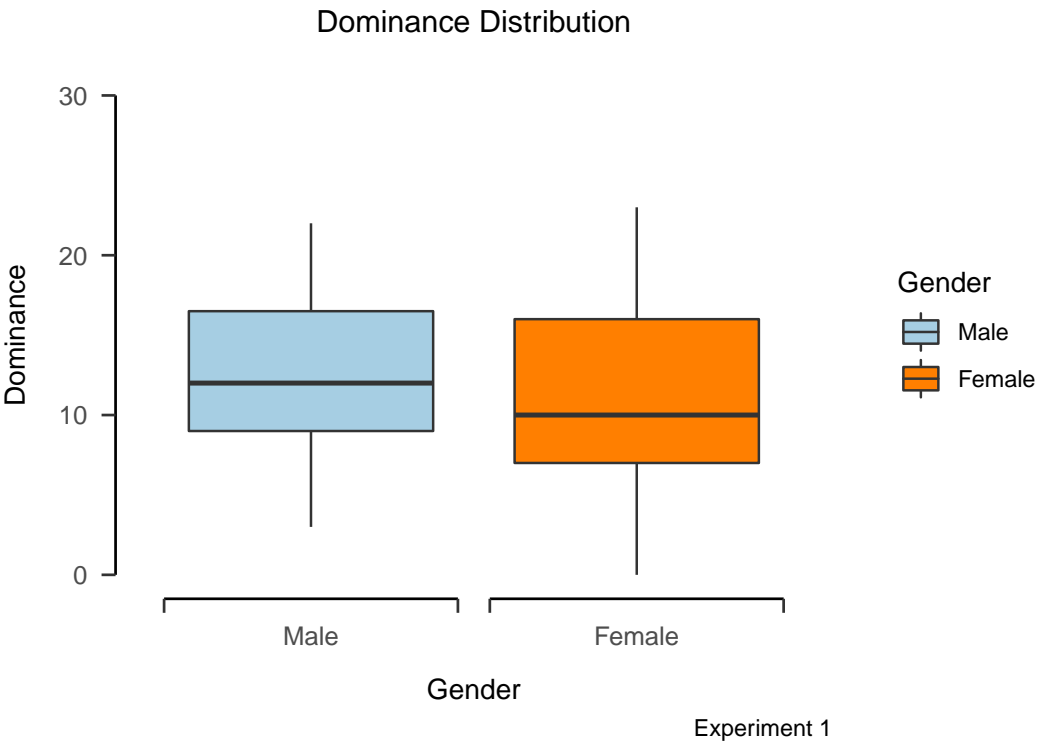
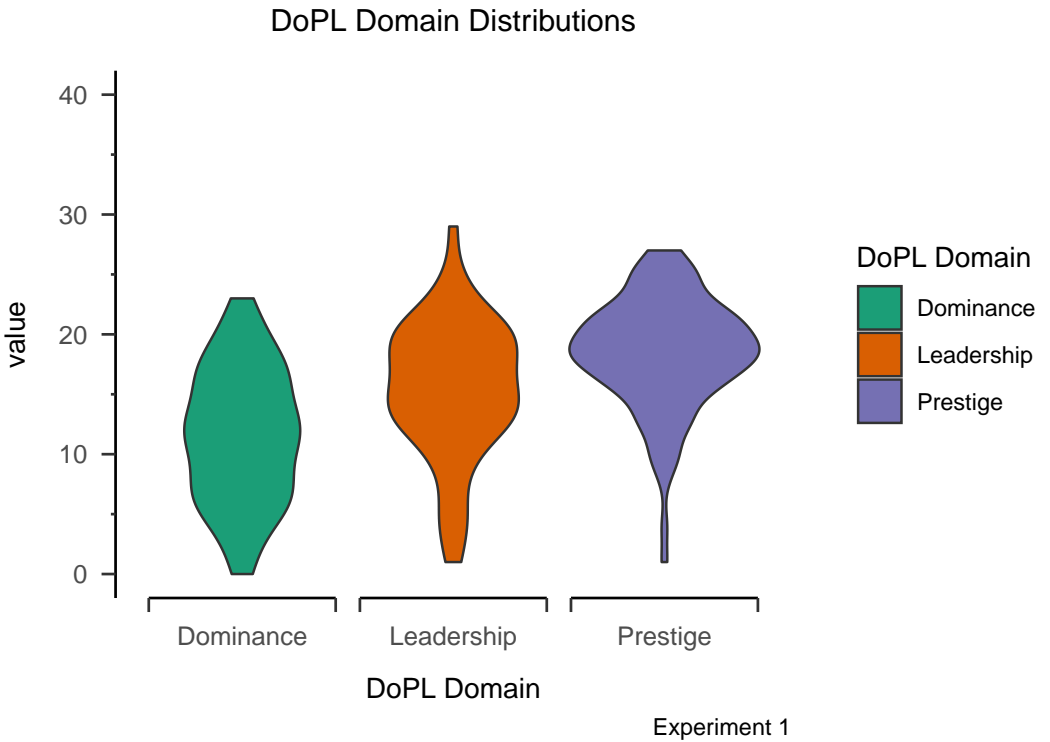
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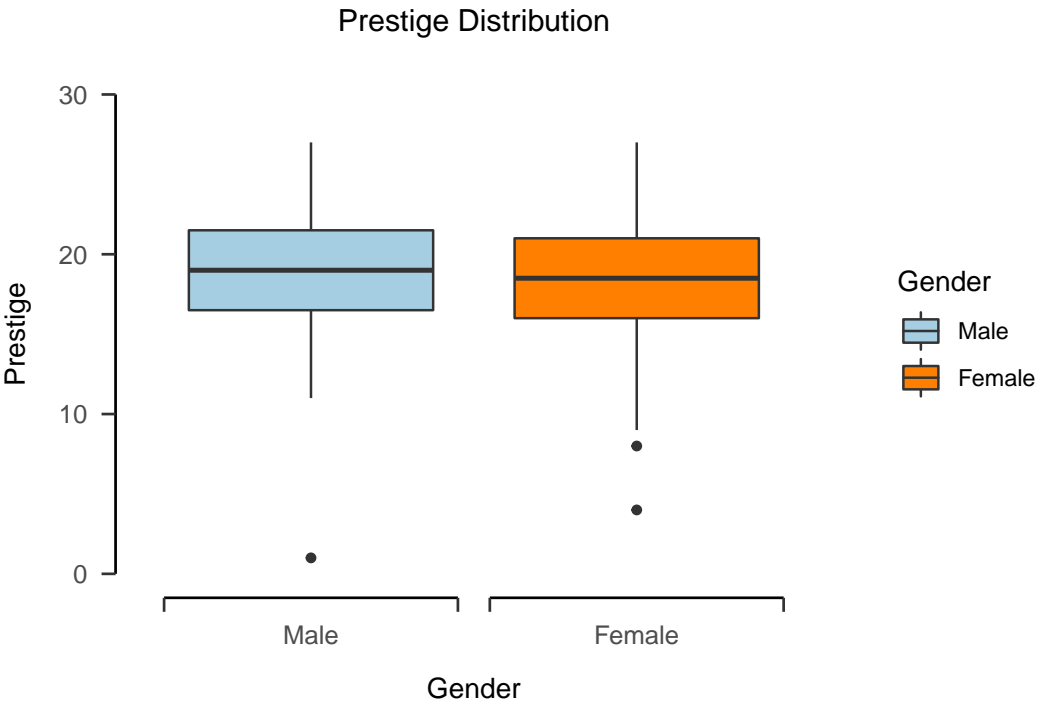
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5 Figures and Tables

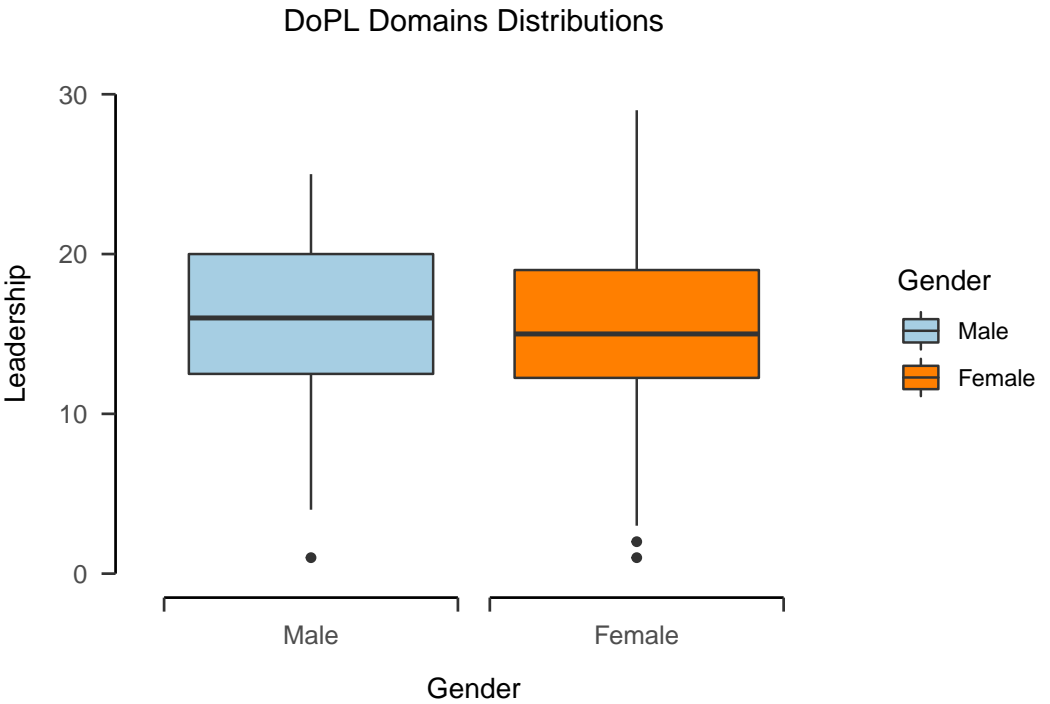
5.1 Figures





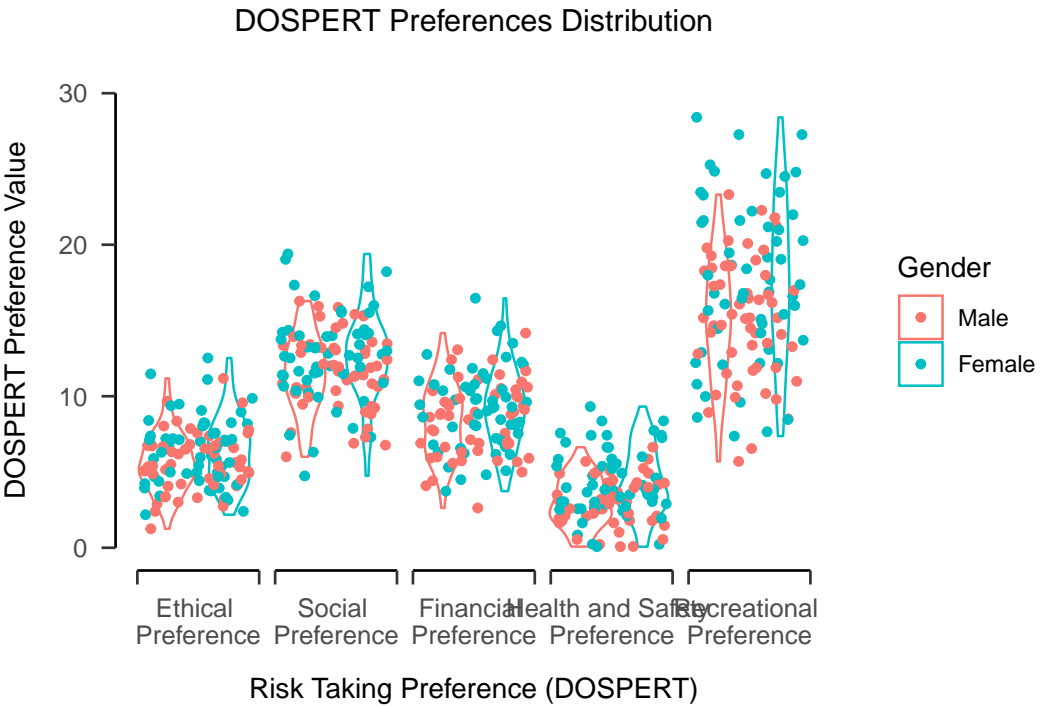
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Experiment 1

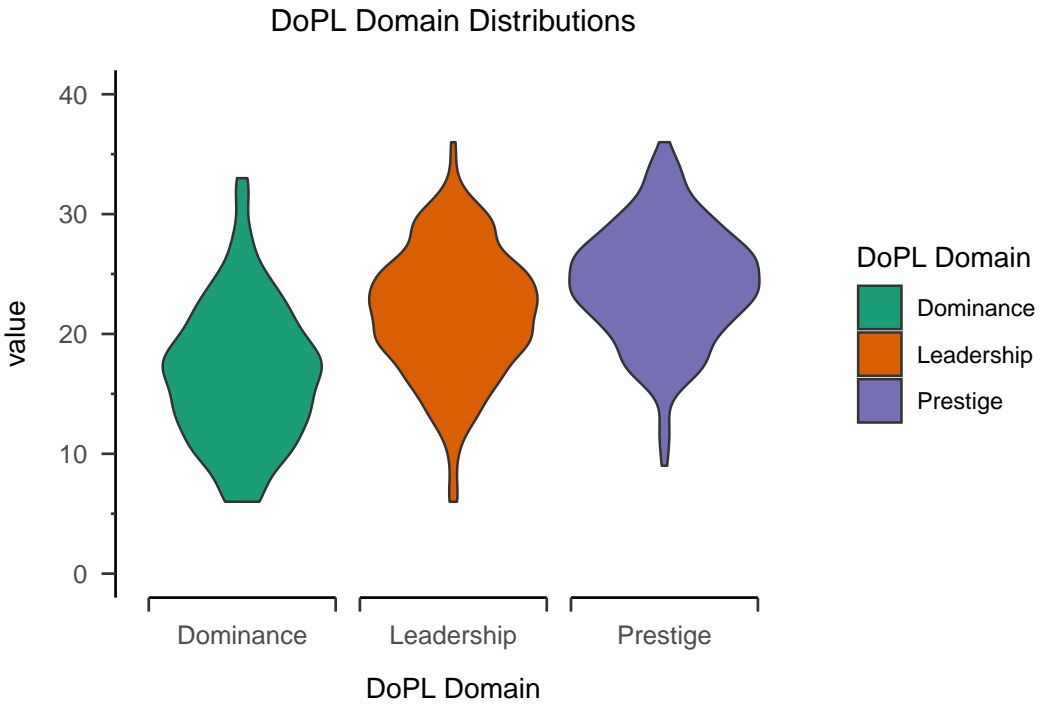


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Experiment 1



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Experiment 2

523 **5.2 Tables****Table 1***Experiment 1: Participant Demographics*

Characteristic	N=109
Age	
Mean (SD)	27 (9.25)
Median [Range]	24 [18.00, 61]
Gender	
Female	54 (50%)
Male	55 (50%)
Ethnicity	
African	8 (7.3%)
Asian	6 (5.5%)
English	10 (9.2%)
European	76 (70%)
Latin American	2 (1.8%)
Other	5 (4.6%)
Scottish	2 (1.8%)
Education	
A-levels or equivalent	32 (29%)
Doctoral Degree	1 (0.9%)
GCSEs or equivalent	8 (7.3%)
Prefer not to respond	1 (0.9%)
Primary School	4 (3.7%)
University Postgraduate Program	21 (19%)
University Undergraduate Program	42 (39%)

Table 2*Fixed Effects: DoPL * General Risk*

Parameter	Estimate	CI	CI Low	CI High
Intercept	3.62	0.95	1.41	5.86
Dominance	3	0.95	1.08	4.93
Gender	-3.02	0.95	-4.95	-1.08
Age	-2.86	0.95	-4.78	-0.93

Note. Table 2 represents fixed effects, confidence intervals low and high for a basic bayesian model of Dominance, Prestige, and Leadership predicting general risk preference. Matching signs for confidence intervals is displayed in the table.

Table 3*DOSPERT and DoPL Interaction: Experiment 1*

Parameter	Estimate	CI	CI Low	CI High
Ethical Preference * Intercept	3.61	0.95	2.79	4.37
Financial Preference * Intercept	8.6	0.95	7.47	9.66
Social Preference * Intercept	9.98	0.95	8.27	11.64
Health and Safety Preference * Intercept	5.6	0.95	4.6	6.54
Recreational Preference * Intercept	1.68	0.95	0.86	2.43
Ethical Preference * Dominance	1.15	0.95	0.61	1.71
Financial Preference * Dominance	0.87	0.95	0.13	1.58
Social Preference * Dominance	1.81	0.95	0.64	2.94
Health and Safety Preference * Dominance	1.09	0.95	0.41	1.77
Recreational Preference * Dominance	1.22	0.95	0.67	1.76
Recreational Preference * Gender	-1.14	0.95	-1.83	-0.47
Recreational Preference * Age	0.46	0.95	0.05	0.86

Note. Fixed effect results of Dominance, Prestige, and Leadership with gender interactions predicting each of the individual Domain Specific Risk Taking (DOSPERT) domains.

Table 4*DOSPERT Benefit and Perception: Experiment 1*

Parameter	Estimate	CI	CI Low	CI High
Risk * Dominance	0.65	0.95	0.36	0.95
Risk * Gender	-0.5	0.95	-0.85	-0.14
Risk * Dominance : Gender	-0.48	0.95	-0.85	-0.11
Risk Perception * Gender	0.43	0.95	0.05	0.8
Risk Perception * Prestige	0.31	0.95	0.01	0.61
Risk Perception * Leadership : Gender	0.43	0.95	0.03	0.82
Risk Benefit * Dominance	0.38	0.95	0.07	0.71
Risk Benefit * Gender	-0.6	0.95	-0.98	-0.22

Note. Fixed effect results of Dominance, Prestige, and Leadership with gender interactions predicting the perceptions and benefits of risk.

Table 5*DOSPERT Benefit and Perception: Experiment 1*

Parameter	Estimate	CI	CI Low	CI High
Ethical Perception * Prestige	0.39	0.95	0.12	0.66
Recreational Perception * Prestige	0.33	0.95	0.06	0.6
Recreational Perception * Age	-0.22	0.95	-0.4	-0.04
Recreational Perception * Dominance : Gender	-0.4	0.95	-0.77	-0.04
Health and Safety Perception * Leadership : Gender	0.44	0.95	0.07	0.8

Note. Fixed effect results of Dominance, Prestige, and Leadership with gender interactions predicting the perceptions and benefits of risk.

Table 6*Experiment 2: Participant Demographics*

Characteristic	N=279
Age	
Mean (SD)	30 (9.92)
Median [Range]	26 [18.00, 78]
Gender	
Female	124 (44%)
Male	155 (56%)
Ethnicity	
African	49 (18%)
Asian or Asian Scottish or Asian British	5 (1.8%)
Mixed or Multi-ethnic	7 (2.5%)
Other ethnicity	3 (1.1%)
Prefer not to respond	1 (0.4%)
White	214 (77%)
Education	
A-Levels or Equivalent	64 (23%)
Doctoral Degree	4 (1.4%)
GCSEs or Equivalent	17 (6.1%)
Prefer not to respond	4 (1.4%)
Primary School	5 (1.8%)
University Post-Graduate Program	62 (22%)
University Undergraduate Program	123 (44%)
Ethnic Origin	
African	48 (17%)
Asian	7 (2.5%)
English	16 (5.7%)
European	193 (69%)
Latin American	6 (2.2%)
Other	9 (3.2%)

Table 7*General Risk * DoPL: Experiment 2*

Parameter	Estimate	CI	CI Low	CI High
Intercept	0.81	0.95	0.4	1.22
Dominance	0.51	0.95	0.17	0.86
Prestige	0.42	0.95	0.07	0.78
Age	-0.02	0.95	-0.03	-0.01

Note. Fixed effect results of Dominance, Prestige, and Leadership with gender interactions predicting general risk preference.

Table 8*B-PNI * DOSPERT : Gender: Experiment 2*

Parameter	Estimate	CI	CI Low	CI High
Vulnerability * Intercept	0.82	0.95	0.44	1.21
Vulnerability * Financial Preference	-0.27	0.95	-0.47	-0.06
Vulnerability * Age	-0.03	0.95	-0.04	-0.02
Vulnerability * Recreational Preference : Gender	-0.34	0.95	-0.62	-0.07
Grandiosity * Gender	0.27	0.95	0.03	0.51
Grandiosity * Social Preference	0.3	0.95	0.11	0.49
Grandiosity * Recreational Preference : Gender	-0.41	0.95	-0.69	-0.13

Note. Fixed effect results of individual DOSPERT domains with gender interactions predicting vulnerable and grandiose narcissism respectively.