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The psychology of risk and power: Power desires and sexual choices

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13

Doctor of Philosophy

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96 **1.1 Literature Review**97 **1.1.1 General Introduction**

98 Research in decision-making is not only concerned with understanding
 99 monumental decisions done in a study or saving a life, but equally in more mun-
 100 dane decisions such as understanding choosing what tea to drink in the morning,
 101 what clothes to wear that day or whether a couple should have a divorce. Making
 102 models of decisions can be difficult given uncertainty is involved along with risk
 103 [citation]. For example, two adult men [or a man and a woman] that are intend-
 104 ing to have sex need to make the decision of whether or not to use a condom.
 105 Added uncertainty is involved with the decision-making process. One partner
 106 may have multiple sexual partners while the other may have only had one, one
 107 partner may have a sexually transmitted infection and might not feel the need
 108 or feel comfortable with informing their partner of their status. Consequences of
 109 not informing can have dire consequences on both partners.

110 In 2016, the year of most recent global data collection, there were 376
 111 million necases of the four curable sexually transmitted infections, chlamydia,
 112 gonorrheatrichomoniasis, and syphilis (World Health Organization, 2018). The
 113 World HealtOrganization [WHO] further estimates that there are one million
 114 new cases of a curablsexually transmitted infection each day. Due to multiple
 115 factors, certain minoritpopulations are more at risk for contracting new sexually
 116 transmitted infections, e., men who have sex with men and female sex workers
 117 (World Health Organization, 2018). Some factors includcertain societal beliefs
 118 men who have sex with men might engage in nonrelational sex “just trying to
 119 figure things out...it’s just a hook up phase” (Elder et al., 2015) , ambiguous
 120 laws concerning the legality of sex work interfering witsafe and available locations
 121 for such activity, as well as. There may alsbe some difficulties in their willingness

122 in their activities be it forced by another sheer necessity. For countries like
123 Scotland there have been a reduction in the amount of new cases of STIs like
124 HIV amongst key populations, however new risks of antibiotic resistant gonorrhea,
125 *Neisseria gonorrhoeae*, have shown a new prevalence in many countries (Ison &
126 Alexander, 2011).

127 **1.1.2 Who is at risk?**

128 There is then the arduous task of how to research the topic of sexually
129 transmitted infections and methods of then understanding what is occurring in
130 the individual. There are neurobiological explanations such as certain brain for-
131 mations occurring that cause individuals to have difficulty understanding the
132 consequences of their actions (Moll et al., 2005; Schaich Borg et al., 2008; Tsoi
133 et al., 2018). There are also more cognitive explanations as well that have shown
134 promising results. For example in the cognitive sub-area of metacognition there
135 is an understanding that there are certain cognitive mechanisms that aid in the
136 individuals ability to regulate their own cognitive understanding of their deci-
137 sions (C. A. Anderson & Bushman, 2002; Yeung & Summerfield, 2012). This
138 self-regulation then contributes to their ability to control whether they act on
139 their baser needs or are able to understand the consequences of what they might
140 or might not engage in (C. A. Anderson & Bushman, 2002; Crandall et al., 2017).
141 How individuals had reached the information on the effectiveness of certain be-
142 havioral changes that reduce the chances of contracting an STI is also in question.
143 For example, research shows that individuals that have a greater understanding
144 of the impact and chances of contracting HIV, actually engage in risky sexual
145 behaviors and therefore increase their chances of contracting the very infection
146 they have more knowledge (D. B. Kirby et al., 2007). Skills based training showed
147 more positive results on practicing safer sex practices. How an individual sees
148 themselves as either a sexual person or person in general is also a factor in how

149 they later may meet an STI (Andersen et al., 1994, 1999; Elder et al., 2015;
150 Gesink et al., 2016). Aggression, in the cognitive sense, also has an impact as
151 well demonstrating a dominance over another person that may cause difficulties
152 in their own ability to make decisions on their sexual health (Malamuth et al.,
153 1996; Williams et al., 2017).

154 Aggression is one method of exerting control over another individual.
155 Overall, the exertion of control itself denotes a power disparity between parties
156 which varies in effects, methods, and domains. [citation]. For example, most re-
157 search has looked at power-over or one person controlling the behavior of another
158 person. This area of research connects the cognitive explanation to behavioral
159 outcomes. Research in power also includes looking at minority populations and
160 aspects of power over to help explain the increased prevalence of certain STIs
161 by discussing and researching certain power dynamics [citations]. The institu-
162 tional support of those power dynamics often reflect power based on age, gender,
163 political orientation, sexual orientation and gender identity (C. A. Anderson &
164 Bushman, 2002; Chiappori & Molina, 2019; Volpe et al., 2013; Winter, 1988).
165 Investigations of the power structure of a family unit has shown to have some
166 interesting consequences on sexual health depending on the type of parenting
167 style and parental attachment [Bugental and Shennum (2002); Chiappori and
168 Molina (2019); Kim and Miller (2020); citations]. A new area of research coming
169 out of power and cognition is the phenomenon where an individual will harm
170 themselves in some way to also inflict harm on another. This type of behavior
171 has been researched extensively in the animal kingdom and is known as spiteful
172 behavior in that one brings down their own wellbeing to spite the other person.
173 There would be interesting avenues to research how spiteful thinking may affect
174 an individual in how they choose one course of action over another. ### Cur-
175 rent Methodology An interesting aspect of the power dynamics and cognition is
176 the moral aspect of decision-making. Often, sexually transmitted infections and

177 risky sexual behavior are used as examples to discuss moral issues. Methods at
178 understanding these situations and other moral issues are through dilemmas or
179 vignettes where individuals are presented with a short scenario and given the
180 opportunity to choose one outcome over another (Ellemers et al., 2019). A trade-
181 mark example is the trolley car experiment where there is a runaway trolley car
182 that is going towards five people (Greene, 2001). The decision is thus, allow the
183 trolley to careen towards the five people or you could divert the trolley by pushing
184 and sacrificing a large man for the sake of the other five. This type of dilemma
185 poses an interesting method of understanding how and what the decision maker
186 would choose. The researcher can then change the dilemma on its severity and
187 complexity. There could also be a change in situation and the types of individuals
188 that are at risk. Individual choice tasks investigating risky sexual behaviors and
189 STIs could be furthered with investigating the moral decision-making aspect of
190 those issues. Current STI research has focused on methods of ways of curbing why
191 individuals act a certain way when presented with a risky sexual situation (D. B.
192 Kirby et al., 2007). Current methods have shown mixed results. In many coun-
193 tries, how people are taught about risk and sex can vary wildly (Unesco, 2015).
194 For example, some countries may have one standard that is a mix of religious
195 and scientific findings of STIs. While others may not even have a formal sexual
196 education program. Some aspects of sexual activity are not even discussed, for
197 example non-heterosexual sex is not always present in education (Ellis & High,
198 2004). This becomes problematic in that men who have sex with men tend to be
199 more at risk to contracting an STI than their peers who engage in heterosexual
200 intercourse. There has also been a lot of research in STI rates. Evidence by
201 governments and international health organizations constantly partnering with
202 universities and healthcare providers to collect new incidences of STIs. There
203 might be one way of researching the topic however, it might not look at all the
204 aspects. Some may be more focused on the outcome while ignoring the causes

205 or hypothesized causes of the outcome. Continued research into the understand-
206 ing of decision-making is important in that understanding the general helps later
207 understanding of the specific.

208 1.2 Risky Sexual Behaviors and STIs

209 Sexual activity/ability to reproduce being one of the seven characteristics
210 of life can cause health, financial, and/or social dangers (to all participants)
211 through risk and neglect [citation]. The curability or manageability also plays
212 a factor in how an STI will affect an individual or community. For example, if
213 the treatment is simple and cheap the effect could be minimal. However, if the
214 treatment cost is expensive the drain on multiple resources could be detrimental.

215 There is a large array of different sexually transmitted infections. Cur-
216 rently, there are eight common types of STIs, chlamydia, gonorrhea, trichomo-
217 niasis, genital warts, genital herpes, pubic lice, scabies, and syphilis (Carmona-
218 Gutierrez et al., 2016), chlamydia being the most common. Treatment for these
219 STIs can range from a simple course of antibiotics such as is the case with chlamy-
220 dia or gonorrhea. Conversely, treatment for syphilis or human immunodeficiency
221 virus [HIV], can be increasingly more involved, cause difficulty in daily life, and
222 have higher costs [citation]. Globally, 37.9 million people are living with HIV
223 [104,000 in the United Kingdom], with 1.7 million being under the age of 15
224 years old (Ison & Alexander, 2011). The treatment for HIV currently is through
225 antiretroviral medication, which is often a combination of multiple medications
226 to account for the high adaptability of the virus (Costa-Lourenço et al., 2017).

227 New difficulties appear from the most common treatment strategies. The
228 main strategy being through targeted and high doses of antibiotics. Concern
229 arises given the fluctuating nature of STI treatment and costs. As such, costs
230 for treatments have seen a markable increase with some treatments costing [en-
231 ter average amount]. An increasing number of antibiotic resistant gonorrhea is

232 occurring globally, with a recent discovery in Japan with a strain that is resistant
233 to ceftriaxone, the most prescribed antibiotic [citations]. Two individuals in the
234 United Kingdom recently [2019] separately tested positive with different strains
235 resistant to not just ceftriaxone but also azithromycin [citations]. The confirmed
236 cases may seem small however, 10% of men and half of women do not show visi-
237 ble symptoms when infected with the bacteria. Medical treatment alone has not
238 been the only strides made in STIs around the with strides in acceptances and
239 less persecution for those that have HIV for example. However, while persecution
240 and stereotyping has gone down in recent years, treatments and availability to
241 those treatments have become increasingly more costly.

242 Sexually active individuals can become infected with an STI through various
243 forms. The first and most prominent vector is through risky sexual behaviors,
244 i.e., multiple sexual partners, unknown sexual history of partners/high-risk indi-
245 viduals, and unprotected sex [citations]. The most common vector is through en-
246 gaging in unprotected sex. Condoms are the most common and effective method
247 of protection, with spermicides increasing their effectiveness [citation]. Once in-
248 fected, the STIs may have detrimental health effects. For example, genital herpes
249 may cause infertility in women and certain types of cancers [citations]. Infections
250 can also be transmitted to infants during childbirth. If left untreated death is
251 possible for example in the case of syphilis which results in an agonizing death
252 [citations]. Condoms are still one of the most effective strategies to practice safe
253 sex along with asking partners about their sexual histories.

254 Even though condoms are the most effective prophylactic, there is still a
255 chance that an individual may contract an STI. Other risky sexual behaviors can
256 increase an individual's susceptibility such as having multiple sexual partners.
257 The age of first sexual intercourse is one of the leading factors that has been
258 associated with increased sexual risk taking and later transmission of STI (de
259 Sanjose et al., 2008; Dickson et al., 1998; Tuoyire et al., 2018). Dickson and

260 colleagues investigated the age at first sexual intercourse and found that women
261 that had their first sexual intercourse before 16 years-old were more likely to
262 report having contracted an STI. In the United Kingdom, age at first heterosexual
263 intercourse has decreased over the last 70 years (Mercer et al., 2013). Mercer and
264 colleagues conducted a longitudinal analysis of age at first sexual intercourse by
265 separating individuals into birth cohorts. Individuals age 65-74 years reported
266 their age at first heterosexual intercourse at 18 years. Every ten years that number
267 has steadily decreased by one with the most recent being 16 years old. Thirty
268 percent of individuals between the ages of 16-24 report have had heterosexual
269 intercourse before the age of sixteen.

270 Individuals 18-24 years of age are not just having intercourse at earlier
271 ages, they are the group with the highest susceptibility of contracting an STI,
272 amounting for #### of new incidences [citation]. College students/aged in-
273 dividuals have also increased alcohol consumption which contributes to lowered
274 inhibitions and increased risky sexual behavior. Because many are developing
275 sexually including some living away from home for the first time, they are more
276 likely to engage in sexual experimentation such as multiple sex partners and in
277 some cases may not use protection such as a condom. Lack of communication has
278 also been shown to influence the likeliness of contracting an STI. Desiderato and
279 Crawford investigated risky sexual behaviors in college students and found that
280 failing to report the number of previous sexual partners and their STI status was
281 common in both men and women (1995). The social stigma of having contracted
282 or being suspected of contracting an STI is one of the most common barriers that
283 inhibits open communication between sexually active individuals (Cunningham
284 et al., 2009). Stigma concerning a positive STI diagnosis can affect not just the
285 physical health of an individual but the psychological health as well. In a series
286 of five experiments, Young and colleagues investigated how the belief of having
287 an STI has an individual's likelihood of getting tested/treatment (2007). They

288 discovered two key points on stigma, others perceive those that have an STI as
289 being less moral and others believe that others will see them as being immoral.
290 This threat of appearing to be immoral may cause the individual to feel as though
291 the mere perception of having an STI is shameful (Cunningham et al., 2009).

292 The social effects of sexuality in general influence how people see them-
293 selves. For gay men in particular there is not just the social stigma that some
294 may have of homosexuality, within the gay community there are some that are
295 expected to be promiscuous or appear to be promiscuous (Elder et al., 2015). In
296 a study based on grounded theory, Elder and colleagues asked gay men all aspects
297 of sexuality to discover and investigate their sexual schemas. A sexual schema
298 is, “a generalization about the sexual aspects of oneself.” (Elder et al., 2015, pg.
299 943). The effects of negative sexual self-schema are also seen in bisexual and
300 straight men and women (Andersen et al., 1994; CYRANOWSKI et al., 1999;
301 Elder et al., 2012, 2015). Having poor sexual self-schema can result in women
302 having issues with sexual desire and an inability of reaching orgasm while in men
303 can result in climaxing too early and erectile dysfunction (CYRANOWSKI et al.,
304 1999; Kilimnik et al., 2018). Long lasting impairments can often lead to more
305 psychological issues.

306 Individuals that have contracted an STI are also more likely to be ostrac-
307 ized from their immediate community. For example, gay men who contracted
308 HIV in the beginning of the AIDs crisis were often ostracized by society even
309 when they were seeking treatment in the hospital. Nurses would often, for lack
310 of knowledge of transmission of the virus, would often drop medication in front
311 of the patient’s door and would rarely physically interact with them [citations].
312 This ostracization further compounds the psychological and physical trauma that
313 individuals with HIV already have. As more knowledge of how HIV is transmitted
314 individuals can get more efficient and better treatment. However, ostracization
315 often occurs [citations].

316 1.3 Moral Judgment and Decision-Making

317 Sam has frequent and unprotected sex with multiple partners, resulting
318 in a sexually transmitted infection that causes visible sores on the mouth and
319 hands. On the way to the chemist one day, Sam has an acute heart attack. By-
320 standers rush to help, but see the sores on Sam's mouth and hands. How would
321 the bystanders react? Would they resuscitate Sam? Would it be morally wrong
322 for them not to risk contracting an unknown disease from Sam, even if it may cost
323 Sam's life? Similar sorts of dilemmas are often used to study moral decision mak-
324 ing of various sorts [citations]. the thought experiment of the trolley dilemma. In
325 research by Haidt and colleagues, compared psychologically normal adults to psy-
326 chopathic traits and performance on the Moral Foundations Questionnaire [MFQ;
327 Graham et al. (2011)]. Findings included higher psychopathic tendencies were
328 associated with lower likelihood of following justice based norms, weak relation-
329 ship with disgust-based and in-group norms, and finally an increased willingness
330 to violate any type of norms for money [Glenn et al., 2008]. The key factor in
331 the Moral Foundations Questionnaire are these moral foundations of which there
332 are five moral domains: harm versus care, fairness versus cheating, loyalty versus
333 betrayal, authority versus subversion, and purity versus degradation [citations].
334 Each of these moral domains have a good and bad component compared to the
335 action type.

336 The MFQ has been extensively used in research on moral decision-making,
337 with common subjects being on political thought [citation]. In the early studies of
338 moral foundations theory, Haidt investigated the moral foundational differences
339 between individuals that lean either politically liberal or conservative. Of the five
340 moral domains, differences appeared in the likelihood of how either conservatism
341 or liberalism affects the likelihood of individuals to endorse each domain. For
342 example, liberalism suggests protecting the individual from harm by the society,
343 especially if they are a member of a minority group. Conversely, conservatism,

344 namely religious conservatism suggests a propensity for sanctity and purity, along
345 with respecting authority and following the societal moral codes [citations]. Emo-
346 tional valence is often the best predictors of moral judgments [citation]. The more
347 emotional valence the faster the response time the decision-maker decides and the
348 more staunchly held they are to their decision. Interestingly, participants would
349 be unable to express or support the decisions that they made. Often, partici-
350 pants would downplay their decisions by laughing or stuttering (Haidt, 2001).
351 Additionally, as their emotional valence of the decision is higher, people are con-
352 sistently holding on to their judgments regardless if they were able to support
353 their judgements when asked or not. It then makes sense why some individuals
354 are more politically intransigent given their deeply held moral codes.

355 Politically held beliefs are often emotionally laden (G. Marcus, 2000). Ac-
356 cordingly, moral foundations theory postulates that there is a good versus bad
357 in the moral domains. When participants are asked to respond to statements
358 that are only offensive but were not harming anyone, participants had issues sup-
359 porting whether the statement was good or bad. For example, when participants
360 were given a story of cleaning the toilet with the national flag, participants would
361 respond that it is bad and said that they just knew that it was wrong [citation].
362 Often when individuals violate the moral rules of “cleaning the toilet with the
363 national flag” violators will be judged as immoral and sometimes punished for
364 their actions [citations]. Intuitively the participants responded that the actions
365 were morally were obviously morally wrong. Requiring little to no explanation
366 as to whAn interesting facet of moral judgment is how individuals react to moral
367 decisions when they are reminded of their own mortality (Greenberg et al., 1990;
368 Rosenblatt et al., 1989). Reminding individuals of their mortality causes them,
369 according to terror management theory, to want to push away from the thought
370 of their eventual death. To do this people often cling to their deeply held cultural
371 beliefs to remove their thoughts from reality (Greenberg et al., 1990). In the

372 first of a series of experiments Rosenblatt and colleagues found that participants
373 that were reminded of their mortality judged prostitutes more harshly, more so
374 if the participants already had negative opinions on prostitution. This was also
375 seen conversely with heroes that follow the cultural norms. Those participants
376 advocated for a larger reward for those individuals (Rosenblatt et al., 1989). The
377 already held opinions were further investigated to where Christians were asked
378 to report their impressions of Christian and Jewish individuals after mortality
379 became salient. Those that were a member of the in-group, Christian, were more
380 likely to be regarded as more positive than their out-group counterparts, Jewish
381 individuals (Greenberg et al., 1990). In-group bias is an oft studied concept in
382 psychological research. Mortality salience and moral violations tend to increase
383 the strength of the in-group bias and then moral judgement and condemnation
384 [citation].

385 When a person does a negative action, the reason for the action is often
386 judged and assumed. An action is commonly seen as being intentional when
387 the individual actively does the action directly. However, intentionality becomes
388 problematic participants have already had negative evaluations of the individ-
389 ual. In an experiment where participants were asked to judge the culpability of
390 an airline passenger that was forced by high-jackers to kill another passenger,
391 the high-jackers were the external force forcing the passenger to commit murder.
392 However, when the participants were told that the passenger already wanted to
393 kill that passenger before the hijacking was occurring, they were judged as more
394 culpable. With or without the internal motivation of wanting to already kill the
395 other passenger, the resulting death still occurs. When participants were given
396 a, less vivid, story of a manager that was only mistreated a black employee and
397 another story of a non-bigoted manager that was mistreating all of their employ-
398 ees, participants judged the bigoted manager more negatively. Even though there
399 were differences in those affected between the managers, participants already held

400 a negative opinion for those that hold bigoted views, and thus judged the bigoted
401 manager more severely [citation].

402 Research in attributional blame continued with an experiment investigat-
403 ing passengers on a sinking boat (Uhlmann et al., 2013). Participants were given
404 a story where there were several individuals on a sinking lifeboat. There were too
405 many people in the boat and the only course of action given was that some of the
406 passengers had to be thrown overboard. In the utilitarian perspective, used for
407 this example, the morally correct judgment was a few must be sacrificed for the
408 safety of the larger group [citation]. However, the participants often judged the
409 surviving passengers as acting selfishly. Thus, they were seeing the passengers as
410 immoral.

411 When individuals commit a moral violation, as would be the case for the
412 surviving passengers, it is not only important to investigate how others would
413 judge and react but also how the individual reacts to their own action (Tangney
414 et al., 2006). Emotional reactions occur when someone does a behavioral action,
415 or they expect a behavioral action to follow. An interesting aspect of emotional
416 reactions are emotional reactions tied to moral judgment. When an individual
417 violates a moral norm, they often feel a personal feeling of shame or guilt which
418 are two of the most commonly studied of these self-evaluative emotions (Tangney
419 et al., 2006). There is an inherent difference between these two emotions, shame is
420 inferred as being negative feelings of oneself that has a public display, while guilt
421 is similar sans the public display (Tangney et al., 1996). Individuals who violate
422 the community's customs on purity often feel a sense of shame. While guilt is
423 commonly felt with a violation of community [citations]. People with STIs are
424 often left feeling shame from their suspected purity violation and thus are often
425 stigmatized for their behavior and punished in some form by the community.
426 This can lead, as discussed in the previous section, to increasing their sense of
427 isolation and negative self-worth. How the moral violators react to their shame

428 or guilt is dependent on whether they experience the former or the latter. There
429 are often attempts to amend the situation when individuals have violated moral
430 norms. Depending on the self-evaluative emotion that is being felt, people will
431 make amends to try to change the situation or they may hide it (Tangney et al.,
432 1996). Guilt is the former and shame is the latter. In most cases individuals that
433 are feeling shame will attempt to ignore their moral violation where they will deny
434 or evade the situation that is causing them shame. Conversely, people with guilt
435 are often motivated by those negative feelings to fix the situation that caused
436 them to feel the guilt. Guilt is often feeling negativity towards a specific action
437 while feeling ashamed or shame is usually a reflection of the entire self [citations].
438 Thus, in relation to how to repair the guilt inducing act, it would appear to be
439 more manageable if the inducing situation was a singular event rather than a
440 feeling of the entire self. Participants that were prompted to feel shame were less
441 likely to express empathy for someone with a disability (Marschall, 1998 as cited
442 in Tangney et al., 2006). When people feel a sense of shame, they self-evaluate
443 and reflect on themselves. This hinders the empathy process that would require
444 them to focus their attention on the emotions of another person.

445 Barnett and Mann investigated sexual offenders to understand how feelings
446 of empathy are blocked for their victim at time of the offense (2013). In empathy
447 research, emotions cannot only just be inferred by the situation but be “felt” to be
448 classified as expressed empathy. Earlier research looking at empathy by sexual
449 offenders has not shown them as being unempathetic. However, Barnett and
450 Mann contend that sexual offenders may have a disruption in seeing distress in
451 their victim. The offender may then believe and assert that their victim deserves
452 the distress that they are experiencing and have a cascading effect where they
453 may be powerful and enjoy the distress of the victim (Barnett & Mann, 2013).

454 1.4 Power

455 A common denominator in research on the dark personality and moral
456 judgment is the influence of power. To define power, one would have to first
457 define the actor and the recipient of the power. Therefore, there is either power-
458 over, power-to, and power-with. Each aspect has their own different consequences
459 [citation]. Power-over is when there is one individual, the one with power, which
460 wields control over a subordinate individual [citation]. Power-to is when an in-
461 dividual of privilege uses their status and power to control and enact a certain
462 consequence [citation]. Finally, power-with is an interesting concept where a per-
463 son of power uses their own power to lift or elevate someone without power to a
464 power position [citation]. This is often seen in community projects where some-
465 one in power goes into a troubled community and facilitates the situation so that
466 those that have less power can have their voices be heard. Power also has var-
467 ious sources each with their own complex consequences: institutional, cultural,
468 gender, age, ethnicity, orientation, and gender-identity [citations]. Some sources
469 of power compound on one another to increase the level of power over other sin-
470 gular sources of power. For example, in many areas of the world a straight white
471 cisgender man would hold the most power relative to other individuals.

472 Power influences relationships be it romantic or familial, work, academics,
473 including each of their derivatives. The three variations of power have various
474 influences on each of the areas of life. Power is neither good nor bad, it is how
475 the power is used that makes it either good or bad [citation]. Power and power
476 structures are often in the media. Often when there is a military coup in a far-
477 off country, individuals discuss power-over. When a humanitarian goes into an
478 impoverished community to help their voices heard, power-with is discussed. As
479 with the previous example, when a legislator uses their influence to pass a law,
480 that legislator uses power-to.

481 Early discussions of power descended from Greek and Roman political

482 philosophy (Aristotle, 1984). Greek Philosopher, Plato's brothers Glaucon and
483 Adeimantus discuss the viability or requirement of citizens being just and lawful if
484 they are able to escape conviction because of some social power or fortune (Aris-
485 totle, 1984). Aristotle continued the discussion by posing the questions, "There is
486 also doubt as to what is to be the supreme power in the state: Is it the multitude?
487 Or the wealthy? Or the good?..." (Aristotle, 1984). Power discussions such as
488 that by Aristotle point to what is the source of someone's power. Does the power
489 come from the majority? Does it come from money? Does it come from those
490 that are just? Each source of power has different effects on those that are gov-
491 erned by those with that power. Polybius of Greece discussed how a constitution
492 should be created and power should be delineated. Polybius power should be
493 split between multiple groups, each with a different form of power and distinct
494 genre to wield that power [citation]. Power continued to be discussed well beyond
495 the Greek philosophers and continued by political researchers and philosophers.
496 Discussions of power soon developed into research on how it influences at the
497 community level.

498 Sociologists, following many of the philosophical thought experiments pre-
499 vious and current to the time, began to research power. Sociologists soon devel-
500 oped the area of research in social power, where political power was a subset.
501 According to Bierstadt, power is always successful, whenever it fails then it is no
502 longer power [1950]. Sociologists asserted that power be conceived of as a force,
503 something that is applied to control a situation. Power can also be conceived of
504 as more passive authority. There are three sources of power: number of people,
505 social organization, and resources. From that individuals that are the class or
506 group or have the most resources that are in need are those that will have the
507 most power. Resources need not be physical objects they can also be more psy-
508 chological such as skills or knowledge. From history there are many examples
509 where power becomes toxic and the leader becomes the oppressor. Be it Mao

510 Ze Dong, Stalin, Lenin, or Hitler. The question then becomes what causes the
511 powerful to become oppressors? In some cases, those that are in power are trying
512 to do good for the community, restrictive from the example.

513 Recently, issues and abuses of power have become much of the forefront
514 of news due to the explosion caused by the me-too movement [citation]. The me-
515 too movement was first coined by activist and sexual harassment survivor Tarana
516 Burke. A decade after she disclosed her sexual assault, the me-too movement and
517 the abuse of power dominated the new cycle with accusations against film pro-
518 ducer Harvey Weinstein [citation]. Weinstein was known for doing philanthropic
519 initiatives during his career by using his influence and money to aid the certain
520 initiatives that he had chosen. However, soon news of his sexual assault accu-
521 sations and threats became news. Soon multiple women came forward accusing
522 Weinstein of assaulting them as well and using his power over them to intimidate
523 and silence them [citation]. This exemplifies how resources and position aid in
524 individuals become powerful. Weinstein had the resources and the authority to
525 abuse his power with many of his peers knowing what he was doing [citation].

526 In psychology, it was originally conceived that power corrupted individ-
527 uals exemplified by the Stanford prison experiment where “regular” individuals
528 were instructed to play the prison guards of a simulated prison. Similar indi-
529 viduals were instructed to portray the prisoners [citation]. Zimbardo, the lead
530 researcher for the experiment, soon noted that the individuals that portrayed the
531 prison guards became aggressive with the prisoners. They verbally and physically
532 assault them. The experiment was halted to stop any more damage from occur-
533 ring. News spread of the results of the experiment and power was seen as causing
534 or influencing the “prison guards” to become aggressive and abuse towards the
535 “prisoners.” However, the nature of the participants became into question [cita-
536 tion]. Later researchers noted that there could have been a self-selection bias of
537 the participants. The experiment was advertised such that the prison experiment

538 was known to the participant. This would then cause individuals to self-select
539 into the group which could possibly skew the results given that the participants
540 may have had authoritarian tendencies and the experiment and added power
541 may have given the opportunity for the participants to express their authoritar-
542 ian tendencies already present [citation]. Similar explanations have occurred in
543 politics.

544 Throughout political history individuals that have reached powerful posi-
545 tions on multiple occasions have given some powerful people the outlet to express
546 their prejudiced and problematic beliefs [citation]. Fear of communist infiltration
547 in the United States caused many fears and blacklisting was a frequent practice.
548 Joseph McCarthy, a Wisconsin senator, would soon use his power as a legisla-
549 tor/senator [citation]. McCarthy would call individuals to the front of the House
550 Un-American Activities Committee because they were suspected of being spies
551 for the Soviet Union. McCarthy and the committee used strong arm tactics and
552 would often threaten individuals brought in front of the committee. Many in-
553 dividuals brought forward often had their lives irrevocably changed [citation].
554 Soon Senator Margaret Chase Smith and six others condemned McCarthy for his
555 actions and tactics. McCarthy was soon censured, and the House Un-American
556 Activities Committee was disbanded. The political issue of power being used
557 as an outlet for prejudiced and authoritarianism became apparent recently after
558 the 2016 United States Presidential Election [citation]. Donald Trump's political
559 exploits would soon highlight his past and present use of power and his uneth-
560 ical dealings. Often Donald Trump would use his power for personal gain and
561 to express his prejudicial and racist beliefs. Examples range from in the 1990's
562 Donald Trump advocated for the Central Park Five, five African-American men
563 accused of raping and murdering a young White woman in Central Park, to be
564 put to death [citation]. However, DNA evidence exonerated on the men of the
565 crime [citation]. Recently, Donald Trump on the campaign trail accused Mexico

566 of sending individuals across the border that were rapists and drug dealers. How-
567 ever, there was no physical proof of the case and became a common trope used by
568 Donald Trump supporters. Because of the misuse of power and authority, there
569 have been increased hate crimes towards Mexican Americans and African Amer-
570 icans [citation]. The Southern Poverty Law Center, an organization that records
571 the number of hate groups currently active in the United States has documented
572 a clear increase in the number of active hate groups after the 2016 election [cita-
573 tion]. The supporters feel a sense of validation for their own beliefs and opinions
574 which they feel allows them some power in and of itself. This then poses an
575 interesting question in power research in psychology. What are the correlates of
576 the power complex? What are the consequences of power? How does a power
577 imbalance affect relationships? The list of questions is vast and varied.

578 Power imbalances in relationships can have negative effects spanning the
579 entirety of an individual's life, be it emotionally, physically, psychologically, and
580 socially [citation]. Dr. Helene Papanek, director of the Alfred Adler institute, a
581 sub-clinic of the Alfred Adler Mental Hygiene Clinic, discussed at a meeting of
582 the Association of Humanistic Psychology, multiple cases of controlling and power
583 disturbances in personal relationships. A relational example was presented where
584 a father, Mr. A had complete control over his wife and daughter. Controlling
585 when they should be home and where they should go. Mr. A even controlled
586 the frequency and positions of sex (Papanek, 1972). Power-over someone can
587 also manifest feelings of low self-worth and destructive behaviors. For example,
588 Ms. C was a young mother of a child born out of wedlock. She was abandoned
589 by her parents and the father of her child. She was constantly controlled by
590 her mother and their disdain for her child out of wedlock. Soon she developed
591 panic attacks but also a sense of superiority over others as a defense mechanism.
592 Dr. Papanek noted that Ms. C developed and lived a life of spiteful behaviors one
593 after the other.

594 The behaviors of Ms. C and Mr. A are not the only examples of individu-
595 als having power over another person or being subjected to the power over them.
596 Power-over has occurred throughout human history and is ingrained in all cultures
597 [citation]. Institutional power-over is quite common cross-culturally. Contracep-
598 tion and control over one's own reproductive system is a prescient debate globally
599 [citation]. In 1960 and 1963 Enovid was approved for use in the United States and
600 United Kingdom respectively [citation]. Doses for contraception early on were of-
601 ten high and news of multiple deaths was reported widely. Cases were brought
602 forward to control the use of contraception. The Roman Catholic Church's stance
603 on hormonal contraception shifted from permission to outlawing anything that
604 would be believed as stopping the ability to propagate [citation]. Interestingly
605 in 1989 researchers working for Pfizer in the United Kingdom were researching a
606 new drug that would aid in treating heart conditions [citations]. The researchers
607 soon discovered sildenafil also could treat erectile dysfunction. Ten years later,
608 sildenafil, brand name Viagra, would be patented and approved for use for the
609 primary treatment for erectile dysfunction [citation]. The same individuals that
610 were trying to reduce the use of female contraception were not trying to do the
611 same for Viagra. The Japanese government and officials had similar attempts
612 to quell the use of female contraception while not doing the same for erectile
613 dysfunction treatments [citation].

614 The Council on Foreign Relations [CFR] a non-profit that specializes in United
615 States and international affairs, conducts an international index on women's work-
616 place equality by rating each country on factors: accessing institutions, getting a
617 job, going to court, protecting women from violence etc. [citation]. Scores range
618 from 0 to 100 where 100 is near total equality in all areas. Of 189 countries on the
619 list only 9 score over 90% in the ranking. One hundred and thirty-eight score be-
620 low 75 with Yemen having the lowest score of 24.5. Including those that intersect
621 with other minorities have even less power like women of color and trans individ-

622 uals [citation]. Women having less power than their male counterparts can have
623 multiple negative outcomes such as continued and sustained sexual aggression,
624 low self-esteem, financial insecurity, lack of freedom of movement, lack of freedom
625 of thought, and in some extreme cases even death [citations]. Cultural relativism
626 creates a difficulty in cultures that have opposing views on the rights and how to
627 navigate that can in and of itself reflect institutional power imbalances.

628 Power imbalances can create a dissociative state where those with less
629 power are seen as more of an object than a person (Gwinn et al., 2013; Haslam &
630 Loughnan, 2014; Lammers & Stapel, 2011; Smith, 2016). While others with more
631 power may see those with less as be less human, some individuals attribute the
632 dehumanization to themselves as well and self-dehumanize (Bastian et al., 2013;
633 Bastian et al., 2012; Bastian & Haslam, 2010; Kouchaki et al., 2018). Effects of
634 prolonged dehumanization by those with more power often, unchecked and under
635 constant pressure, can lead some individuals to believe what the powerholders
636 say is true. The question remains, why do people in power begin to dehumanize
637 those with less power? Commonly when an individual harms another usually
638 there is some perspective taking by the harmer. However, to dehumanize the
639 other person it lessens the sense of empathy that one would normally feel thus
640 allowing for more damage and harm to be committed [citations]. “With great
641 power comes great responsibility” often quoted by Uncle Ben in the Spider-Man
642 comic books, yet has its possible historical foundations in the French National
643 Convention in 1793, leads credence to the wane and flow of the effects of power
644 (Nationale (Paris), 1793). Those in power make decisions for those for which they
645 are leaders. As is the case with every decision there is a reaction to the decision.
646 Sometimes those effects are negative and those with less power may be harmed in
647 the process. Dehumanization of those in less power acts as a defense mechanism
648 to continue making life changing decisions.

649 Often dehumanization is left to more extreme occasions such as war,

650 infrahumanization, where ascriptions of nonhuman qualities are more subtle
651 and not as extreme (Haslam & Loughnan, 2014). Research in dehumaniza-
652 tion/infrhumanization by Gwinn and colleagues used game theory and univer-
653 sity students to simulate power differentials (2013). In their research they found
654 that once individuals began to gain power, they would ascribe fewer humanlike
655 personality traits than those with less power ascribing traits to the powerful.
656 Interestingly, there is a reciprocal relationship between self-dehumanization and
657 immoral behavior (Kouchaki et al., 2018). When individuals would commit an
658 immoral behavior, they would afterwards often feel less human, which in turn has
659 them act more immoral.

660 1.5 Cognition

661 When deciding, the decisions are not subject to a vacuum. Every decision
662 that is made is contingent on the prior understanding and knowledge of the
663 situation and the possible outcomes of those decisions. The woman choosing one
664 tie over another or the little boy choosing one doll to play with is contingent on
665 the knowledge that they both separately have gained in their lives so far. It could
666 be said that the time at which an infant is first learning about the world is when
667 individual decisions are made by instinct without gained knowledge. When the
668 infant ages and acquires more memories from the environment, it will begin to
669 use those memories in making future decisions.

670 The first step at acquiring new knowledge is interacting with the environ-
671 ment. One explanation that has been garnering more cognitive and biological
672 attention is from Dr. Nelson Cowan’s integrated working memory model (Cowan,
673 1999). In the integrated working memory model there are four key areas in at-
674 taining new information: [1] a brief sensory store, [2] a long term store, [3] the
675 focus of attention, [4] and the central executive. Each key area has a separate
676 function[s] that allows for new information to be “judged” against the existing

677 information. The information that is then held temporarily in a sensory store
678 to where it is then sent to the long term store to be “directed” by the central
679 executive which is a metacognitive process that controls and directs where atten-
680 tion should be placed on the incoming information. There is then a controlled
681 more conscious action or an automatic action based on the type of incoming in-
682 formation. Information that is automatic usually is considered habituated to the
683 memory system and is therefore not a novel stimulus. More focus is given to
684 information/stimuli that is more novel. In the integrated working memory model
685 information that is incoming in the brain is often “filtered” through a lens that
686 is understandable to the individual, novel stimuli. From here the information is
687 then encoded and stored in long-term memory for reactivation by new stimuli.

688 The integrated working memory model is similar in thought to how indi-
689 viduals make decisions based on the laws and customs of a society. Johnathan
690 is a normal member of his community. They participate in a common game in
691 the park with some friends. Johnathan says an inappropriate joke to one of their
692 friends. The others overhear and judge, automatically, the content of the joke to
693 the governed norms of the community. Because this joke is outside the common
694 norms of the community, the others see Johnathan as violating their moral code.
695 Johnathan’s friends would then automatically analyze the joke against existing
696 information and attend to the key features. Like how the central executive guides
697 and directs attention to the new novel stimuli, the inappropriate joke. Interesting
698 research has been done with morality and metacognition.

699 Common to research in metacognition and moral reasoning is theory of
700 mind. A theory of mind is the ability for an individual to attribute or recognize
701 the inner workings of the mind and differentiate those from the self and others
702 [citation]. Research in theory of mind has contributed to our understanding of
703 autism, schizophrenia, and traumatic brain injury (Byom & Mutlu, 2013). An
704 individual with deficits of theory of mind would for example be unable to attribute

705 signs of happiness on other people, such as a smile or a frown [citation]. In the
706 case of Johnathan, if they had a theory of mind deficits, they would be unable or
707 have difficulty in noticing the dissatisfaction of their joke. Research using theory
708 of mind to investigate social situations such as the example with Jonathan helps
709 psychologists get a better understanding of how moral judgement works and is
710 affected by deficits in the cognitive system.

711 As discussed thus far, cognitively, each component contributes and affects
712 the individual in a multitude of ways. As previously discussed in the section
713 on risky sexual behaviors, how the individual sees themselves and how they be-
714 lieve others see them is exceptionally important to their overall cognitive health.
715 These sexual schemas that each of us create about ourselves is influenced by daily
716 interactions and prior history, whether sexual. Outside of how the sexual schema
717 individuals create about themselves affects their later sexual health, it can change
718 how they see and interact with the world around them.

719 The prior knowledge that individuals have can have a negative effect on
720 their ability to gain and hold new information. Those with lower prior knowledge
721 of a given technology often have difficulty in reconstructing the information of a
722 new product compared to those that have less prior knowledge [Wood & Lynch,
723 2002]. When people are presented with new information, a new technology, en-
724 coding of the new information takes place. As that occurs, prior information of
725 the technology is retrieved, and an inference is made on subsequent information
726 by comparing the new and old information. This affects the ability to encode the
727 new information “correctly” and can disrupt later retrieval of the former. Similar
728 effects are seen when investigating motivational forces. Individuals with prior
729 knowledge may also have an overconfidence of the information that they already
730 have and are not as motivated to attend to the information they are learning.

731 Extending the research on prior knowledge and new technology, prior
732 knowledge and complacency has also been seen with contracting an STI, a virus,

733 or chances of getting pregnant [citations]. The decisional factors that occur cog-
734 nitively to choose safe sex practices is complex and subject to frequent change.
735 Many people that are confronted with decisions, such as the mundane choice of
736 what shoes to wear, base their decisions from using a variety of cognitive methods.
737 Often, the choice to wear a condom or other safe sex practices is through a risk
738 heuristic of contracting or transmitting a sexually transmitted infection. With
739 decisions based on issues of purity, such as sex, one heuristic that is commonly
740 employed is the affect heuristic. The affect heuristic in judgements of risk is where
741 the thought or priming of a specific word triggers a quick emotional response to
742 that stimuli word (Finucane et al., 2000). When presented with words that are
743 physically harmful such as cigarettes or pesticides, participants rated the words
744 as too risky and reported negative feelings concerning those stimulus words. Af-
745 fective considerations of high-risk situations are often put into perspective with
746 individuals in risky situations.

747 An artifact of how issues such as HIV, Human Immunodeficiency Virus,
748 discussed in the media and the community that it affects creates a cognitive
749 problem with individuals judging the likelihood of catching the virus, especially
750 women. In the media it is often discussed how men who have sex with men
751 are the main individuals catching and spreading HIV. While HIV still affects the
752 LGBTQ+ community, the discussion around susceptibility affects other individu-
753 als outside of the LGBTQ+ community negatively as well. Women, for example,
754 have a genetically higher susceptibility to the virus [citation]. That being so,
755 often due to unintended ignorance to their chances are one of the leading groups
756 contracting new cases of HIV [citation]. Downlow culture as well increases the
757 chances of contracting the virus. Amongst some men that do not wish to ac-
758 knowledge their own homosexuality will choose to forgo the condom, implies a
759 premeditation, and do not necessarily believe they will contract the virus [cita-
760 tion]. Both examples are contributed by the representation of HIV in the media

761 and the current zeitgeist.

762 Common in all decisions is the difficulty and uncomfortability between
763 different decisions and opposing situations, is cognitive dissonance (Festinger,
764 1957). An interesting cognitive dissonant series of thoughts that some males
765 have is when choosing to wear a condom. Often, there will be the cognition of not
766 wanting to contract an STI, but also believing that condoms are uncomfortable
767 (MacPhail & Campbell, 2001). In addition to believing they are uncomfortable
768 there is an interesting cultural belief amongst some young men that wearing a
769 condom makes them less of a man (Pleck et al., 1993; Vincent et al., 2016). To
770 some the main decisional factor in whether to wear a condom is not contracting an
771 STI or getting pregnant [citation]. While, as noted with perceptions on condoms,
772 often comfort and how others will see them is the main factor. Sexually active
773 or those thinking to become sexually active often get their opinions on sexual
774 activity and safety practices from their peers. Often, the opinions of peers are
775 more influential than those of the parent[s]. Interestingly, some men believe that
776 due to the cultural cognition around contraception, discussions and decisions of
777 contraception is a female decision (Castro-Vázquez, 2000).

778 **1.5.1 Aggression and Cognition**

779 Connected to spitefulness, moral judgment, and cognition is human ag-
780 gression. Traditionally, aggression is differentiated between the outcome or moti-
781 vation of the incident. Aggression as it is operationally defined is behavior that is
782 committed by the actor to another with the intent to harm the other (C. A. An-
783 derson & Bushman, 2002). This is then further differentiated to violence where
784 violence is the intent to cause severe harm such as death. From aggression re-
785 search and moral judgment, cognitive neoassociation theory [CNT] was beginning
786 to become tantamount in research on aggressive behavior.

787 In CNT, similar to the study of disgust association where some research

788 suggests that inducing the disgust response to smell causes individuals to become
789 more conservative against breaking moral norms (Eskine et al., 2011; Horberg et
790 al., 2009; Laakasuo et al., 2017; Tybur et al., 2009). Important to the present
791 discussion on sexual judgment, research by Laakasuo and colleagues suggest that
792 disgust is only predictive of sexual disgust (2017). From CNT, Anderson and
793 Bushman developed the General Aggression Model [GAM] is a theoretical out-
794 line that combines multiple smaller domain specific theories on aggression like
795 CNT (2002). The GAM has processes: inputs, routes, and outcomes of a social
796 situation. The inputs separate into a person and situation centered inputs. The
797 individual then has an internal examination of the person or situation, cognitions
798 like affective processes, availability heuristics, theory of mind evaluations, scripts
799 and schemata [Barnett and Mann (2013); Kahneman and Tversky (1972); scripts
800 and schemata citation]. Appraisal and a decision process are the last step in
801 the GAM, where the individual evaluates the situation based on the inputs and
802 routes. Anderson and Bushman contend that there are two types of outcomes,
803 thoughtful and impulsive actions. Like the affective heuristic, the impulsive ac-
804 tion is often fast and does not require as much deliberation. While the thoughtful
805 action requires more time and evaluation of all the possible outcomes.

806 Scripts and schemata are key components of the GAM. Schema, more
807 broadly than sexual schema, are cognitive compositions or structures that repre-
808 sent objects or ideas interconnected by their features (DiMaggio, 1997). Multiple
809 representations of schema and stereotypical event sequences are labelled as scripts
810 (Abelson, 1981). A classic example of a cognitive script is events surrounding
811 reading the menu at a restaurant (Abelson, 1981). An individual is at a restau-
812 rant and needs to order from the menu. However, they lost their reading glasses.
813 As Abelson contends, the reader must infer what is needed in reading a menu,
814 what occurs at a restaurant, and so on. The automatic process of schematic
815 activation begins with certain key features of an object or event being noticed

816 by the individual. For example, recognizing a tree one of the first features that
817 are noticed that distinguishes a tree are the leaves. From the leaves, the bark is
818 activated, and so on making up the concept of a tree.

819 Often aggression and discrimination can be understood through the
820 schematic model. Media and social representations of individuals, especially men
821 of color, have often made assumptions and portrayed them as violent and crim-
822 inals. Currently a majority of US adults in a recent Pew Research Center poll
823 report that race relations are currently worse, Black Americans and people of
824 color in general report more cases of discrimination, and a majority say Black
825 Americans in particular are treated unfairly by the police (Pew Research Center,
826 2019). Aggression or discrimination is often the result of associating one group
827 with negative connotations. For example, in the case of those that believe Black
828 Americans are criminals they have through cognitive associations have related
829 the schematic concept of criminal with the features/schema of what they believe
830 is a Black American. The discrimination and aggression then occur through the
831 GAM processes with negative actions being the outcome.

832 Pertinent after the advent of the me-too movement, see section 3, issues of
833 how these power over views of women, especially women of color and trans women
834 of color, become learned and develop in sexual aggression. Sexual aggression in
835 and of itself is a subgroup of aggression where the intent to harm is sexual in
836 nature (C. A. Anderson & Bushman, 2002; Malamuth et al., 1995). Many of
837 the targets of sexual aggression are women of color and trans women of color
838 [citations]. In the reported cases men are often the perpetrators of the crimes
839 (C. A. Anderson & Bushman, 2002). The aggression itself appears to be domain
840 specific to one gender, women. Often, acts of sexual aggression are verbal in
841 nature, such as asking repeatedly for sex or threatening to break up with them
842 (Testa et al., 2015). When individuals gain power they may aggress more over
843 those that have less power, which may pay head to the continued sexual aggression

844 and sexual violence against women of color and trans women of color for whom
845 have historically low levels of power [citations].

846 Recent research by Garnett and Mann investigate the cognitive and em-
847 pathetical processes of those that commit a sexual aggression or sexual violence,
848 labelled as sexual offending (2013). Common to research on sexual offenses, re-
849 search contends that those that do offend do so with a lack of empathy towards
850 their victims (Marshall et al., 1993). As noted in the previous section on moral
851 judgment, see section 3, empathetic processing by these offenders are more com-
852 plex than the simple inability to “feel” or identify the emotions of others. There
853 is a recurring theme amongst offenders of women being deceitful and sexually en-
854 titled (Barnett & Mann, 2013; Gannon, 2009). The offenders often feel slighted
855 when a woman denies their sexual advances which then tends to lead to some
856 sexual aggression (Gannon, 2009; Williams et al., 2017).

857 The rejection of the sexual advances of the man often damage their sense
858 of masculinity (Malamuth et al., 1996). Relating back to beliefs on condom
859 use amongst men, even the request of wearing condom could be interpreted as
860 damaging their sense of masculinity (Castro-Vázquez, 2000). If the woman, in
861 a heterosexual relationship, brings the condom they are damaging the males
862 masculinity but if the male brings the condom he could also be considered a
863 thoughtful individual. While the woman would be seen as easy. This could
864 then lead to bullying behavior and ostracization from the moral judgment of the
865 community on the woman’s purity, see section moral judgment.

866 **1.6 Experiment One**

867 **1.7 Method**

868 **1.7.1 Participants**

869 Participants were a convenience sample of 92 (Mage = 26.14, SD = 8.69)
870 individuals from Prolific Academic crowdsourcing platform (“www.prolific.co”).

871 Requirements for participation were: (1) be 18 years of age or older and (2) and
872 as part of Prolific Academics policy, have a prolific rating of 90 or above. Par-
873 ticipants received £4 or £8 an hour as compensation for completing the survey.
874 Table 1 shows the demographic information for experiment one.

875 **1.7.2 Demographic Questionnaire**

876 Prior to the psychometric scales, participants are asked to share their
877 demographic characteristics (e.g., age, gender, ethnicity, ethnic origin, and edu-
878 cational attainment).

879 **1.7.3 Dominance, Prestige, and Leadership Orientation**

880 The 18-item Dominance, Prestige, and Leadership scale [DoPL; Suessen-
881 bach et al. (2019)], is used to measure dominance, prestige, and leadership orien-
882 tation. Each question corresponds to one of the three domains. Each domain is
883 scored across six unique items related to those domains (e.g., “I relish opportuni-
884 ties in which I can lead others” for leadership) rated on a scale from 0 (Strongly
885 disagree) to 5 (Strongly agree). Internal consistency reliability for the current
886 sample is $\alpha = 0.85$.

887 **1.7.4 Spitefulness Scale**

888 The Spitefulness scale (D. K. Marcus et al., 2014) is a measure with seven-
889 teen one-sentence vignettes to assess the spitefulness of participants. The original
890 spitefulness scale has 31-items. In the original Marcus and colleagues’ paper, fif-
891 teen were removed. For the present study, however, 4-items were removed because
892 they did not meet the parameters for the study i.e., needed to be dyadic, more
893 personal. Three reverse-scored items from the original thirty-one were added af-
894 ter meeting the requirements. Example questions included, “It might be worth
895 risking my reputation in order to spread gossip about someone I did not like,” and
896 “Part of me enjoys seeing the people I do not like to fail even if their failure hurts

me in some way”. Items are scored on a 5-point scale ranging from 1 (“Strongly disagree”) to 5 (“Strongly agree”). Higher spitefulness scores represent higher acceptance of spiteful attitudes. Internal consistency reliability for the current sample is $\alpha = 0.84$.

1.7.5 *Sexuality Self-Esteem Subscale*

The Sexuality Self-Esteem subscale (SSES; Snell and Papini (1989)) is a subset of the Sexuality scale that measures the overall self-esteem of participants. Due to the nature of the study, the sexuality subscale was chosen from the overall 30-item scale. The 10-items chosen reflected questions on the sexual esteem of participants on a 5-point scale of +2 (Agree) and -2 (Disagree). For ease of online use the scale was changed to 1 (“Disagree”) and 5 (“Agree”), data analysis will follow the sexuality scale scoring procedure. Example questions are, “I am a good sexual partner,” and “I sometimes have doubts about my sexual competence.” Higher scores indicate a higher acceptance of high self-esteem statements. Internal consistency reliability for the current sample is $\alpha = 0.95$.

1.7.6 *Sexual Jealousy Subscale*

The Sexual Jealousy subscale by Worley and Samp (2014) are 3-items from the 12-item Jealousy scale. The overall jealousy scale measures jealousy in friendships ranging from sexual to companionship. The 3-items are “I would worry about my partner being sexually unfaithful to me.”, “I would suspect there is something going on sexually between my partner and their friend.”, and “I would suspect sexual attraction between my partner and their friend.” The items are scored on a 5-point scale ranging from 1 (“Strongly disagree”) to 5 (“Strongly agree”). Higher scores indicate a tendency to be more sexually jealous. Internal consistency reliability for the current sample is $\alpha = 0.72$.

922 **1.7.7 *Sexual Relationship Power Scale***

923 The Sexual Relationship Power Scale (SRPS; Pulerwitz et al. (2000)) is
924 a 23-item scale that measures the overall power distribution in a sexually active
925 relationship. The SRPS is split into the Relationship Control Factor/Subscale
926 (RCF) and the Decision-Making Dominance Factor/Subscale (DMDF). The RCF
927 measures the relationship between the partners on their agreement with state-
928 ments such as, “If I asked my partner to use a condom, he[they] would get vi-
929 olent.”, and “I feel trapped or stuck in our relationship.” Items from the RCF
930 are scored on a 4-point scale ranging from 1 (“Strongly agree”) to 4 (“Strongly
931 disagree”). Lower scores indicate an imbalance in the relationship where the par-
932 ticipant indicates they believe they have less control in the relationship. Internal
933 consistency reliability for the current sample is $\alpha = 0.87$.

934 The DMDF measures the dominance level of sexual and social decisions in
935 the relationship. Example questions include, “Who usually has more say about
936 whether you have sex?”, and “Who usually has more say about when you talk
937 about serious things?” Items on the DMDF are scored on a 3-item scale of 1
938 (“Your Partner”), 2 (“Both of You Equally”), and 3 (“You”). Higher scores indi-
939 cate more dominance by the participant in the relationship. Internal consistency
940 reliability for the current sample is $\alpha = 0.64$.

941 **1.7.8 *Scenario Realism Question***

942 Following Worley and Samp in their 2014 paper on using vi-
943 gnettes/scenarios in psychological studies, a question asking the participant how
944 realistic or how much they can visualize the scenario is. The 1-item question is
945 “This type of situation is realistic.” The item is scored on a 5-point scale with
946 how much the the participant’s agreed with the above statement, 1 (“Strongly
947 agree”) to 5 (“Strongly disagree”). Higher scores indicate disagreement with the
948 statement and reflect the belief that the scenario is not realistic.

949 **1.7.9 *Spiteful Vignettes***

950 After participants complete the above scales, they are presented with 10-
951 hypothetical vignettes. Each vignette was written to reflect a dyadic or triadic
952 relationship with androgynous names to control for gender. Five vignettes have
953 a sexual component while five are sexually neutral. An example vignette is,

954 “Casey and Cole have been dating for 6 years. A year ago, they both
955 moved into a new flat together just outside of the city. Casey had an
956 affair with Cole’s best-friend. Casey had recently found out that they
957 had an STI that they had gotten from Cole’s best-friend. Casey and
958 Cole had sex and later Cole found out they had an STI.”

959 For each vignette, the participant is asked to rate each vignette on how
960 justified they believe the primary individual, Casey in the above, is with their
961 spiteful reaction. Scoring ranges from 1 (“Not justified at all”) to 5 (“Being
962 very justified”). Higher scores overall indicate higher agreement with spiteful
963 behaviors.

964 **1.8 Procedure**

965 Participants were recruited on Prolific Academic. Participants must be
966 18-years of age or older, restriction by study design and Prolific Academic’s user
967 policy. The published study is titled, “Moral Choice and Behavior”. The study
968 description follows the participant information sheet including participant com-
969 pensation. Participants were asked to accept their participation in the study.
970 Participants were then automatically sent to the main survey (Qualtrics, Inc.).

971 Once participants accessed the main survey, they were presented with the
972 consent form for which to accept they responded by selecting “Yes”. Participants
973 were then asked to provide demographic characteristics such as gender, ethnic-
974 ity, and educational attainment. Participants would then complete in order, the

975 spitefulness scale, the sexual relationship power scale, the sexual jealousy sub-
976 scale, and sexuality self-esteem subscale. Next, participants were presented ten
977 vignettes where they were instructed to rate on the level of justification for the
978 action carried out in the vignette. After each vignette, participants would rate
979 the realism of the scenario. Upon completion of the survey (median completion
980 time 20 minutes SD = 10 Minutes 30 seconds), participants were shown a de-
981 briefing message and shown the contact information of the Primary Investigator
982 (Andrew Ithurburn). Participants were then compensated at £8/hr. via Prolific
983 Academic.

984 1.9 Data Analysis

985 Demographic characteristics were analyzed using a one-way analysis for
986 continuous variables (age) and Chi-squares tests for categorical variables (sex,
987 ethnicity, ethnic origin, and educational attainment). Means and standard de-
988 viations were calculated for the surveys along with correlational analyses (e.g.,
989 spitefulness, SESS, SRPS, SJS).

990 Bayesian multilevel models were used to test differences between levels of
991 justifications of vignettes that are either sexually or non-sexually vindictive in
992 behavior.

993 1.10 Results and Discussion

994 Ninety-Two individuals participated in the present experiment. A major-
995 ity of the participants in experiment 1 identified as male ($n = 62$). Table 1 shows
996 the demographic information for experiment 1. Table 2 presents the results of
997 a Bayesian correlational matrix of all measures. As evidenced in the Bayesian
998 correlational matrix, most surveys positively correlated with one another.

Table 1*Participant Demographic Information (Experiment 1)*

Demographic Characteristic	
Age	
Mean (SD)	26.14 (8.69)
Median [Min, Max]	23 [18,60]
Gender	
Female	30 (32.6%)
Male	62 (67.4%)
Ethnic Origin	
Scottish	2 (2.2%)
English	10 (10.9%)
European	69 (75.0%)
Latin American	2 (2.2%)
Asian	5 (5.4%)
Arab	1 (1.1%)
Other	2 (2.2%)
Prefer not to answer	1 (1.1%)
Education	
Primary School	3 (3.3%)
GCSEs or Equivalent	8 (8.7%)
A-Levels or Equivalent	32 (34.8%)
University Undergraduate Program	31 (33.7%)
University Post-Graduate Program	17 (18.5%)
Prefer not to answer	1 (1.1%)
Ethnicity	
White	82 (89.1%)
Mixed or Multiple ethnic origins	4 (4.3%)
Asian or Asian Scottish or Asian British	5 (5.4%)
Other ethnic group	1 (1.1%)

Table 2*Bayesian Correlation with 95% Credibility Intervals*

	Estimate	Upper CI	Lower CI
SSES * SRPS	-0.40	-0.45	-0.34
SSES * Spite	0.08	0.02	0.14
SRPS * Spite	-0.16	-0.23	-0.10
SSES * SJS	0.23	0.17	0.29
SRPS * SJS	-0.27	-0.33	-0.21
Spite * SJS	0.19	0.12	0.25
SSES * Dominance	-0.20	-0.26	-0.14
SRPS * Dominance	0.07	0.00	0.13
Spite * Dominance	0.50	0.45	0.54
SJS * Dominance	0.25	0.19	0.31
SSES * Prestige	-0.07	-0.13	0.00
SRPS * Prestige	0.27	0.21	0.33
Spite * Prestige	0.06	0.00	0.13
SJS * Prestige	-0.01	-0.08	0.05
Dominance * Prestige	0.19	0.12	0.25
SSES * Leadership	-0.29	-0.35	-0.23
SRPS * Leadership	0.30	0.24	0.36
Spite * Leadership	-0.03	-0.09	0.04
SJS * Leadership	-0.08	-0.15	-0.02
Dominance * Leadership	0.31	0.25	0.36
Prestige * Leadership	0.37	0.31	0.42

999 1.10.1 *Spitefulness*

1000 For this analysis we used the Bayesian parameter estimation using R and
1001 brms (Bürkner, 2018; R Core Team, 2021). An annotated r script file, including
1002 all necessary information is available at <https://osf.io/jz6qb>. On average,
1003 individuals were not rated as being more spiteful, ($M = 33.92$, $SD = 9.32$, Min-
1004 max = [16 - 57]). Justification as a function of the four indices was moderately
1005 explained by the model ($R^2 = 0.54$). We conducted an exploratory Bayesian
1006 correlation analysis on the data, where we investigated correlations between 8 of
1007 the indices (e.g., Spite, Dominance, Prestige, Leadership, Sexual Jealousy, Sexual
1008 Self-Esteem, and Sexual Relationship Power Scale).

1009 Selected notable non-null correlations were found between Spite and Sex-

ual Jealousy (95% CI: [0.12, 0.25]), Spite and Dominance (95% CI: [0.45, 0.54]),
and Sexual Relationship Power and Dominance (95% CI: [0, 0.13]). Table 2
contains a complete list of all Bayesian correlations.

1.11 Limitations and Future Directions

1.12 Experiment 2

1.13 Methods

Materials remain the same in terms of the (1) Demographic Questionnaire,
(2) Dominance, Prestige, and Leadership Questionnaire, and (3) DOSPERT
Questionnaire. However, we added the Brief-Pathological Narcissism Inventory to
assess possible interactions of dominance and narcissism in risky decision-making.
Materials and methods were approved by the University of ## Participants

Following experiment 1, 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: 212-2021/2]. The present study was pre-registered along with a copy of
anonymized data and a copy of the R code is available at (<https://osf.io/s4j7y>).

1.14 Materials

1.14.1 Brief-Pathological Narcissism Inventory

The 28 item Brief Pathological Narcissism Inventory (B-PNI; Schoenleber
et al., 2015) is a modified scale of the original 52-item Pathological Narcissism

1036 Inventory (PNI; Pincus et al., 2009). Like the PNI the B-PNI is a scale measuring
1037 individuals' pathological narcissism. Items in the B-PNI retained all 7 patholog-
1038 ical narcissism facets from the original PNI (e.g., exploitativeness, self-sacrificing
1039 self-enhancement, grandiose fantasy, contingent self-esteem, hiding the self, de-
1040 valuing, and entitlement rage). Each item is rated on a 5 point Likert scale
1041 ranging from 1 (not at all like me) to 5 (very much like me). Example items
1042 include "I find it easy to manipulate people" and "I can read people like a book."

1043 1.15 Procedure

1044 Participants were recruited via a study landing page on Prolific's website
1045 or via a direct e-mail to eligible participants (Prolific Academic, 2018). The study
1046 landing page included a brief description of the study including any risks and ben-
1047 efits along with expected compensation for successful completion. Participants
1048 accepted participation in the experiment and were directed to the main survey
1049 on pavlovia.org (an online JavaScript hosting website similar to Qualtrics) where
1050 they were shown a brief message on study consent.

1051 Once participants consented to participate in the experiment they an-
1052 swered a series of demographic questions. Once completed, participants com-
1053 pleted the Dominance, Prestige, and Leadership Scale and the Domain Specific
1054 Risk-taking scale. An additional survey was added (the novel aspect of experi-
1055 ment 2) where participants, in addition to the two previous surveys, were asked to
1056 complete the brief-pathological narcissism inventory. The three scales were coun-
1057 terbalanced to account for order effects. After completion of the main survey,
1058 participants were shown a debriefing statement that briefly mentions the purpose
1059 of the experiment along with the contact information of the main researcher (AI).
1060 Participants were compensated £4.00 via Prolific Academic.

1061 1.16 Data analysis

1062 Demographic characteristics were analyzed using multiple regression for
1063 continuous variables (age) and Chi-square tests for categorical variables (gender,
1064 race, ethnicity, ethnic origin, and education). Means and standard deviations
1065 were calculated for the relevant scales (i.e., DoPL and DOSPERT). All analyses
1066 were done using (R Core Team, 2021) along with (Bürkner, 2017) package.

1067 The use of bayesian statistics has a multitude of benefits to statistical
1068 analysis and research design. One important benefit is through the use of prior
1069 data in future analyses. Termed as priors, is the use of prior distributions for
1070 future analysis. This allows for the separation of how the data might have been
1071 collected or what the intention was. In essence, the data is the data without the
1072 interpretation of the scientist.

1073 All relevant analyses were conducted in a Bayesian framework using the
1074 brms package (Bürkner, 2018) along with the cmdstanr packages notes (Gabry &
1075 Cesnovar, 2021). In addition to the aforementioned packages, we used bayestestR,
1076 rstan, and papaja for analysis along with the creation of this manuscript (Aust
1077 & Barth, 2020; Makowski et al., 2019; Stan Development Team, 2020).

1078 1.17 Results

1079 1.18 Preregistered Analyses

1080 1.18.1 Demographic and DoPL

1081 1.19 Domain-Specific Risk-Taking

1082 1.20 Interactions

1083 1.21 Discussion

1084 1.22 Limitations

1085 1.23 Future Implications

Table 3

	Parameter	CI	CI_low	CI_high
8	b_Intercept	0.95	0.74	3.27
18	b_Spite_z	0.95	0.06	0.24
5	b_Dominance_z:ContentSexual	0.95	0.01	0.28

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

2.1 Dominance, Prestige, and Leadership orientation

Research in power desire motives has focused on three subdomains: dominance, leadership, and prestige (Suessenbach et al., 2019). Each of these three different power motives is explained as to different ways or methods that individ-

1108 uals in power sought power or were bestowed upon them. Often these dominant
1109 individuals will wield their power with force and potentially cause risk to them-
1110 selves to hold onto that power.

1111 **2.1.1 Dominance**

1112 The dominance motive is one of the more researched methods and well-
1113 depicted power motives. Individuals with a dominant orientation display the more
1114 primal of human behavior. These individuals will seek power through direct meth-
1115 ods such as asserting dominance, control over resources, or physically assaulting
1116 someone (M. W. Johnson & Bruner, 2012; Winter, 1993). Early research in dom-
1117 inance motives has shown that acts of dominance ranging from asserting physical
1118 dominance over another to physical displays of violence has been shown in many
1119 mammalian species, including humans (Petersen et al., 2018; Rosenthal et al.,
1120 2012).

1121 Individuals high in dominance are often high in Machiavellianism, nar-
1122 cissism, and often are prone to risky behavior (discussion further in the next
1123 section). Continued research has hinted at a possible tendency for males to dis-
1124 play these dominant seeking traits more than females (Bareket & Shnabel, 2020;
1125 Sidanius et al., 2000). When high dominance individuals assert themselves they
1126 are doing so to increase their sense of power (C. Anderson et al., 2012; Bierstedt,
1127 1950). Asserting one's sense of dominance over another can be a dangerous task.
1128 In the animal kingdom, it can often lead to injury. While, in humans asserting
1129 dominance can take a multitude of actions such as leering behaviors, physical dis-
1130 tance, or other non-verbal methods to display dominance (Petersen et al., 2018;
1131 Witkower et al., 2020). Power from a dominant perspective is not always be-
1132 stowed upon someone. Often, high dominance individuals will take control and
1133 hold onto it.

1134 2.1.2 Prestige

1135 Contrary to the dominant motivation of using intimidation and aggression
1136 to gain more power, a prestige motivation or prestige, in general, is bestowed
1137 upon an individual from others in the community (Maner & Case, 2016;
1138 Suessenbach et al., 2019). Different from the dominance motivation, a prestige
1139 motivation is generally unique to the human species (Maner & Case, 2016).
1140 Due in part to ancestral human groups being smaller hunter-gatherer societies,
1141 individuals that displayed and used important behaviors beneficial to the larger
1142 group were often valued and admired by the group. Therein, the social group
1143 bestows the authority onto the individual. Generally, this type of behavior
1144 can be passively achieved by the prestigious individual. However, this does
1145 not remove the intent of the actor in that they too can see prestige from the
1146 group, but the method of achieving that social status greatly differs from that of
1147 dominance-seeking individuals.

1148

1149 Apart from dominance-motivated individuals that continually have to fight
1150 for their right to have power over others, individuals that seek or were given power
1151 through a prestige motivation are not generally challenged in the same sense as
1152 dominant individuals. Displaying behaviors that the community would see as
1153 beneficial would endear them into the community making the survival of the
1154 community as a whole better (Maner & Case, 2016). Evolutionarily this would
1155 increase the viability of the prestigious individual and their genes. Similar to
1156 the dominance perspective, the prestige perspective overall increases the power
1157 and future survivability of the individual. However, due to the natural difference
1158 between prestige and dominance, dominance-seeking individuals are challenged
1159 more often resulting in more danger to their position (M. W. Johnson & Bruner,
1160 2012).

1161 2.1.3 Leadership

1162 With a shared goal a leader is someone that takes initiative and attracts
1163 followers for that shared goal (Van Vugt, 2006). Leadership is an interesting
1164 aspect of behavior in that it is almost exclusive to human interaction. Dis-
1165 cussions by evolutionary psychologists point to the formation of early human
1166 hunter-gatherer groups where the close interconnectedness created a breeding
1167 ground for leadership roles. As early humans began to evolve it would become
1168 advantageous for individuals to work together for a common goal (King et
1169 al., 2009). Often, individuals with more knowledge of a given problem would
1170 demonstrate leadership and take charge or be given power. Multiple explanations
1171 of the evolution of leadership exist such as coordination strategies, safety, along
1172 with evidence for growth in social intelligence in humans (King et al., 2009; Van
1173 Vugt, 2006).

1174

1175 An interesting aspect of leadership motivation is the verification of the
1176 qualities of the leader by the communities. Individuals that are often put into
1177 leadership roles or take a leadership role often display the necessary goals, qual-
1178 ities, and knowledge to accomplish the shared/stated goal. However, this is not
1179 always the case especially for those charismatic leaders where they could stay
1180 on as a leader longer than the stated goal requires (Vugt & Ronay, 2014). Tra-
1181 ditionally, leadership was thought to be fluid in that those with the necessary
1182 knowledge at the time would be judged and appointed as the leader. However,
1183 these charismatic leaders use their charisma, uniqueness, nerve, and talent to hold
1184 onto their status. ## Risk

1185 Every time people leave the relative safety of their home, every decision
1186 they make they are taking some form of risk. Financial risk is often discussed
1187 in the media usually concerning the stock market. However, the risk is not
1188 just present in finances but also in social interactions such as social risk, sexual

1189 risk, health and safety risk, recreational, and ethical risks (Breakwell, 2007;
1190 Kühberger & Tanner, 2009; Shearer et al., 2005; Weber et al., 2002). Each
1191 individual is different in their likelihood and perception of participating in those
1192 risks. Some will be more inclined to be more financially risky while others would
1193 risk their health and safety.

1194

1195 Whether to engage in a risky situation is very complex depending on a
1196 cost-benefit analysis (P. S. Johnson et al., 2015). Do the positives outweigh
1197 the negatives? In practice, not all individuals will do a cost-benefit analysis of
1198 a risky situation. Often, the timing of an event makes such an analysis dis-
1199 advantageous. The benefits are often relative to the individual decision-maker.
1200 Differences emerge in the general likelihood to engage in risky behavior such that
1201 males tend to be more likely to engage in risky behaviors than their female coun-
1202 terparts (Chen & John, 2021; Desiderato & Crawford, 1995). Women tended to
1203 avoid risky situations except for social risks.

1204 **2.2 The present study**

1205 The present study sought to further our understanding of dominance, pres-
1206 tige, and leadership motivations in human decision-making. Furthering this, we
1207 seek to bridge the connection between risk-taking behaviors, from diverse do-
1208 mains, and the dominance, prestige, and leadership orientations. Following the
1209 literature, we predicted that participants that were high in dominance orientation
1210 would be more likely to not only engage in risky behaviors but praise the ben-
1211 efits of participating in those behaviors. Individuals with prestige or leadership
1212 orientation.

1213 **# Experiment 1 ## Methods**

1214 Participants were a convenience sample of 111 individuals from Prolific
1215 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: 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>).

2.3 Materials

2.3.1 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.

2.3.2 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) 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 [20] consistency reliability for the current sample is $\alpha = 0.86$.

1240 2.3.3 Domain Specific Risk-taking Scale

1241 The 40-item Domain-Specific Risk-taking Scale, DOSPERT (Weber et al.,
1242 2002) is a scale assessing individuals' likelihood of engaging in risky behaviors
1243 within 5 domain-specific risky situations: financial ("Gambling a week's income
1244 at a casino."), social ("Admitting that your tastes are different from those of your
1245 friends"), recreational ("Trying out bungee jumping at least once"), health and
1246 safety ("Engaging in unprotected sex"), and ethical ("Cheating on an exam")
1247 situations. Each risky situation is then rated on a five-point Likert scale (1 being
1248 very unlikely and 5 being very likely). Two additional five-point Likert scales
1249 assess risk perception and expected benefits (1 being not at all risky and 5 being
1250 extremely risky; 1 being no benefits at all and 5 being great benefits) respectively.
1251 Example risky situations are "Admitting that your tastes are different from those
1252 of a friend" and "Drinking heavily at a social function." Internal consistency
1253 reliability for the current samples for the 3 sub-domains are $\alpha = 0.85$, $\alpha = 0.90$,
1254 $\alpha = 0.92$ respectively.

1255 2.4 Procedure

1256 Participants were recruited via a study landing page on Prolific's web-
1257 site or via a direct e-mail to eligible participants (Prolific Academic, 2018). The
1258 study landing page included a brief description of the study including any risks
1259 and benefits along with expected compensation for successful completion. Par-
1260 ticipants accepted participation in the experiment and were directed to the main
1261 survey (Qualtrics, Inc; Provo, UT) where they were shown a brief message on
1262 study consent.

1263 Once participants consented to participate in the experiment they an-
1264 swered a series of demographic questions. Once completed, participants com-
1265 pleted the Dominance, Prestige, and Leadership Scale and the Domain Specific
1266 Risk-taking scale. The two scales were counterbalanced to account for order ef-

fects. 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 £4.00 via Prolific Academic.

2.5 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 (Bürkner, 2017) package.

The use of bayesian statistics has a multitude of benefits to statistical analysis and research design. One important benefit is through 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).

2.6 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

Table 4*Participant demographic information (Experiment 1)*

Variables	*n* = 111
Age	
Mean (SD)	26.84 (9.21)
Median [Min, Max]	24 [18,61]
Gender	
Female	54 (48.6%)
Gender Non-Binary	2 (1.8%)
Male	55 (49.5%)
Education	
Primary School	4 (3.6%)
GCSes or Equivalent	8 (7.2%)
A-Levels or Equivalent	32 (28.8%)
University Post-Graduate Program	21 (18.9%)
University Undergraduate Program	44 (39.6%)
Doctoral Degree	1 (0.9%)
Prefer not to answer	1 (0.9%)
Ethnicity	
African	8 (7.2%)
Asian	6 (5.4%)
English	10 (9.0%)
European	77 (69.4%)
Latin American	2 (1.8%)
Scottish	2 (1.8%)
Other	6 (5.4%)

information for the participants. The average completion time for participants was 20M 58s ($SD = 10M\ 43s$).

2.6.1 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).

2.6.2 Demographic and DoPL

All participants completed the dominance, leadership, and prestige scale (Suessenbach et al., 2019). Empirically, men have generally been more

Table 5

Parameter	CI	CI_low	CI_high
b_Intercept	0.95	1.37	5.81
b_dominanceSum	0.95	1.07	4.91
b_leadershipSum	0.95	-3.88	-0.02
b_Gender1	0.95	-4.95	-1.09
b_Age	0.95	-4.80	-0.96

dominance-oriented in their behavior (Rosenthal et al., 2012). Following the literature, men tended to be more dominance orientated 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.

2.7 Domain-Specific Risk-Taking

As predicted individuals that identified as male were more likely

2.8 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 of DoPL orientation and preference, specifically for ethical, financial, social, health and safety, and recreational preference. Participant age and gender also appeared to affect recreational preference.

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

1318 **2.9 Discussion**

1319 **2.10 Experiment 2**

1320 **2.11 Methods**

1321 Materials remain the same in terms of the (1) Demographic Questionnaire,
1322 (2) Dominance, Prestige, and Leadership Questionnaire, and (3) DOSPERT
1323 Questionnaire. However, we added the Brief-Pathological Narcissism Inventory to
1324 assess possible interactions of dominance and narcissism in risky decision-making.
1325 Materials and methods were approved by the University of ## Participants

1326 Following experiment 1, participants were a convenience sample of 111
1327 individuals from Prolific Academic’s crowdsourcing platform (www.prolific.io).
1328 Prolific Academic is an online crowdsourcing service that provides participants
1329 access to studies hosted on third-party websites. Participants were required to be
1330 18 years of age or older and be able to read and understand English. Participants
1331 received £4.00, which is above the current minimum wage pro-rata in the United
1332 Kingdom, as compensation for completing the survey. The Psychology Research
1333 Ethics Committee at the University of Edinburgh approved all study procedures
1334 [ref: 212-2021/2]. The present study was pre-registered along with a copy of
1335 anonymized data and a copy of the R code is available at ([https://osf.io/](https://osf.io/s4j7y)
1336 [s4j7y](https://osf.io/s4j7y)).

1337 **2.12 Materials**

1338 **2.12.1 Brief-Pathological Narcissism Inventory**

1339 The 28 item Brief Pathological Narcissism Inventory (B-PNI; Schoenleber
1340 et al., 2015) is a modified scale of the original 52-item Pathological Narcissism
1341 Inventory (PNI; Pincus et al., 2009). Like the PNI the B-PNI is a scale measuring
1342 individuals’ pathological narcissism. Items in the B-PNI retained all 7 patholog-
1343 ical narcissism facets from the original PNI (e.g., exploitativeness, self-sacrificing

self-enhancement, grandiose fantasy, contingent self-esteem, hiding the self, devaluing, and entitlement rage). Each item is rated on a 5 point Likert scale ranging from 1 (not at all like me) to 5 (very much like me). Example items include “I find it easy to manipulate people” and “I can read people like a book.”

2.13 Procedure

Participants were recruited via a study landing page on Prolific’s website or via a direct e-mail to eligible participants (Prolific Academic, 2018). The study landing page included a brief description of the study including any risks and benefits along with expected compensation for successful completion. Participants 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 £4.00 via Prolific Academic.

2.14 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

1370 were calculated for the relevant scales (i.e., DoPL and DOSPERT). All analyses
1371 were done using (R Core Team, 2021) along with (Bürkner, 2017) package.

1372 The use of bayesian statistics has a multitude of benefits to statistical
1373 analysis and research design. One important benefit is through the use of prior
1374 data in future analyses. Termed as priors, is the use of prior distributions for
1375 future analysis. This allows for the separation of how the data might have been
1376 collected or what the intention was. In essence, the data is the data without the
1377 interpretation of the scientist.

1378 All relevant analyses were conducted in a Bayesian framework using the
1379 brms package (Bürkner, 2018) along with the cmdstanr packages notes (Gabry &
1380 Cesnovar, 2021). In addition to the aforementioned packages, we used bayestestR,
1381 rstan, and papaja for analysis along with the creation of this manuscript (Aust
1382 & Barth, 2020; Makowski et al., 2019; Stan Development Team, 2020).

1383 **2.15 Results**

1384 **2.16 Preregistered Analyses**

1385 **2.16.1 Demographic and DoPL**

1386 **2.17 Domain-Specific Risk-Taking**

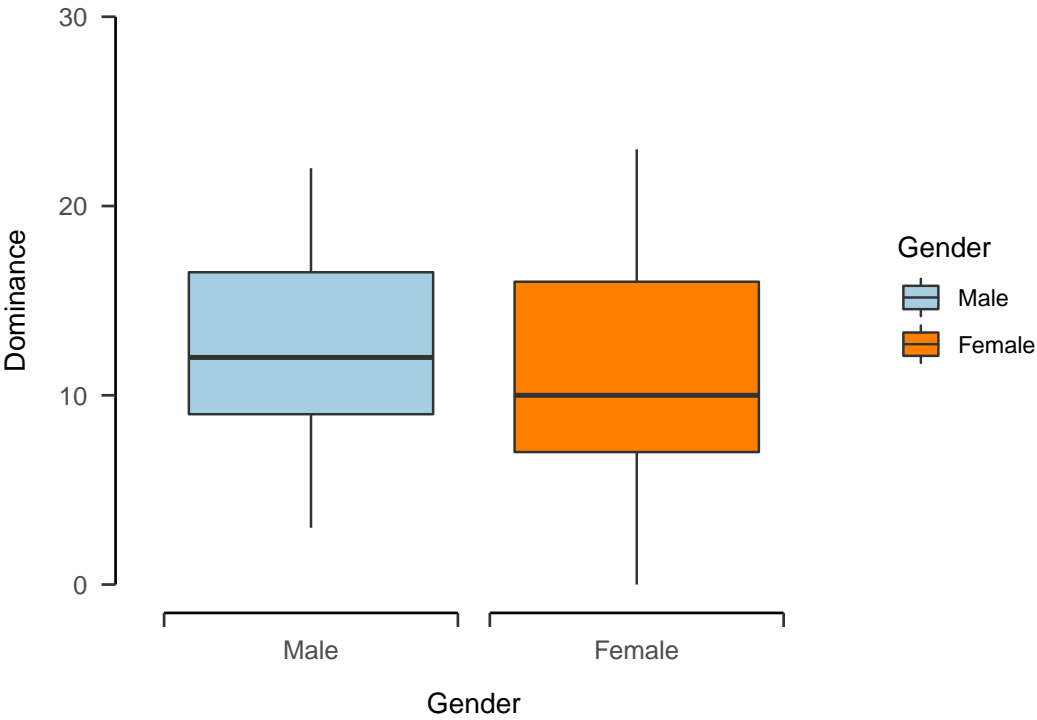
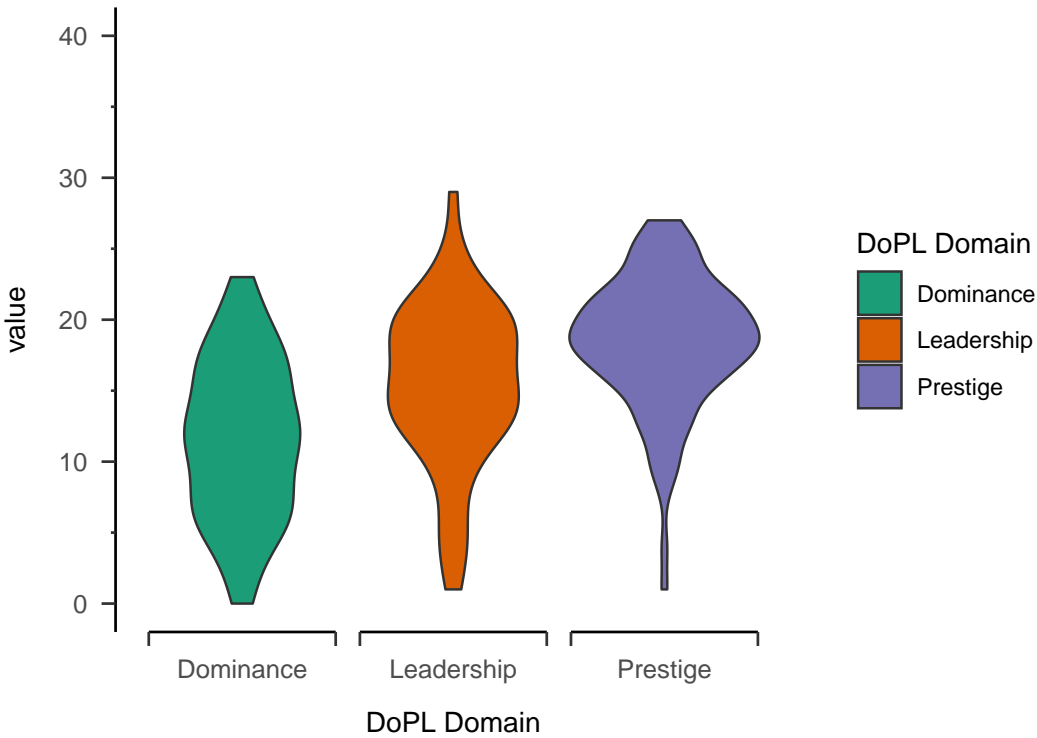
1387 **2.18 Interactions**

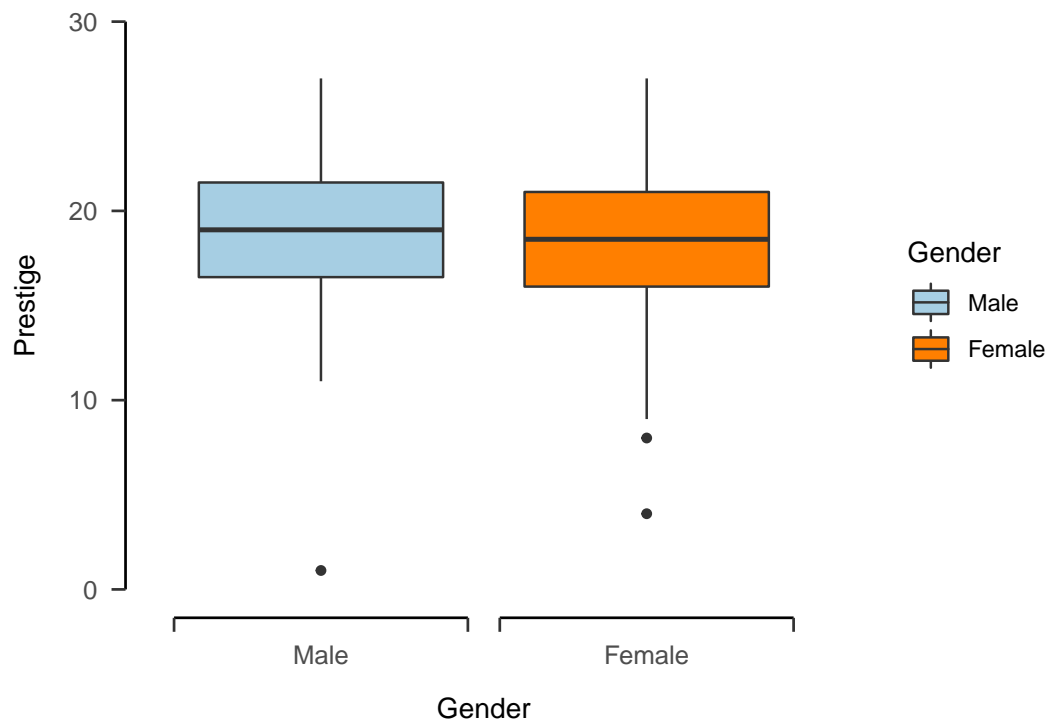
1388 **2.19 Discussion**

1389 **2.20 Limitations**

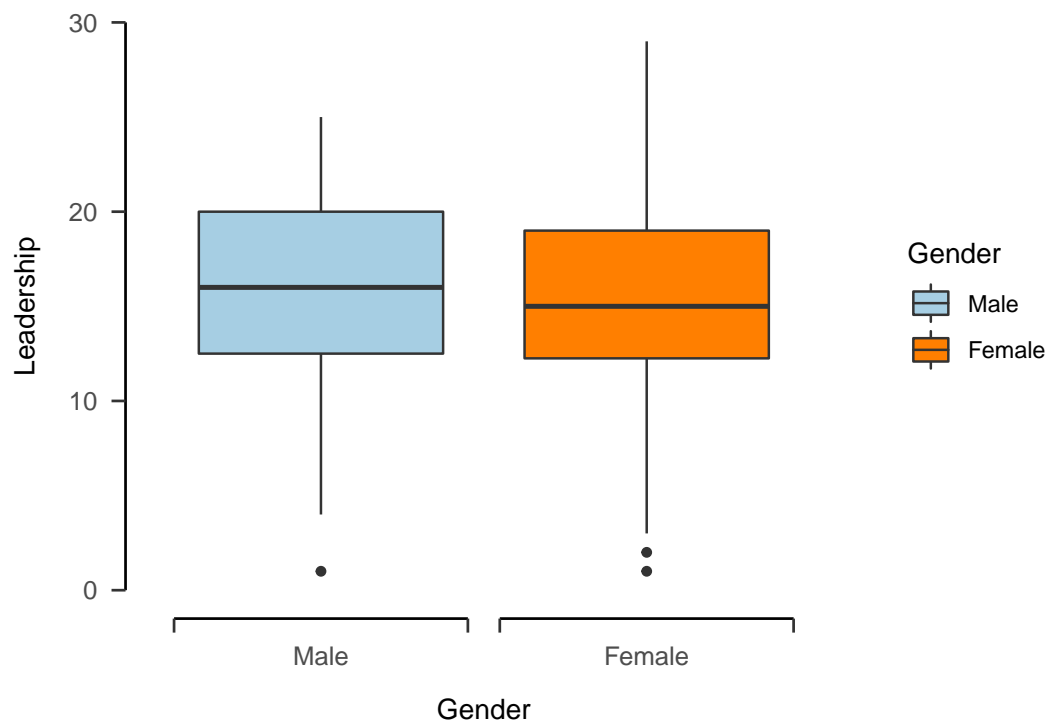
1390 **2.21 Future Implications**

3 Figures and Tables





1394



1395

Table 6

	Estimate	Est.Error	Q2.5	Q97.5
Intercept	3.62	1.13	1.41	5.86
dominanceSum	3.00	0.99	1.08	4.93
prestigeSum	0.09	0.99	-1.84	2.02
leadershipSum	-1.91	0.98	-3.85	0.02
Gender1	-3.02	0.99	-4.95	-1.08
Age	-2.86	0.99	-4.78	-0.93

Table 7

Parameter	CI	CI_low	CI_high
b_ethicalPreference_Intercept	0.95	2.85	4.42
b_ethicalPreference_dominanceSum	0.95	0.61	1.71
b_financialPreference_Intercept	0.95	7.50	9.67
b_financialPreference_dominanceSum	0.95	0.14	1.59
b_socialPreference_Intercept	0.95	8.34	11.67
b_socialPreference_dominanceSum	0.95	0.60	2.87
b_healthAndSafetyPreference_Intercept	0.95	4.65	6.59
b_healthAndSafetyPreference_dominanceSum	0.95	0.41	1.77
b_recreationalPreference_Intercept	0.95	0.95	2.48
b_recreationalPreference_dominanceSum	0.95	0.66	1.74
b_recreationalPreference_Gender1	0.95	-1.83	-0.47
b_recreationalPreference_Age	0.95	0.06	0.87

4 Chapter 3:

4.1 Experiment 1:

4.2 Experiment 1 Review

In an extension of the previous research, we sought other areas of possible interest in what could be affecting individuals likelihood to engage in either immoral or risky behaviors. So far we have shown a connection with power motives such as Dominance, Prestige, and leadership (DoPL); along with investigating the connection between DoPL and the domain-specific risk-taking scale. An intriguing area that has not been extensively researched is narcissism. Personality research is often the viewpoint at which narcissism is investigated such as us-

1406 ing the five-factor model concept where the primary traits are extraversion and
1407 agreeableness (Hyatt et al., 2018).

1408 **4.3 Narcissism**

1409 Narcissism is a personality trait that originally was seen as a method or
1410 mechanism to shield the individual from feelings of low self-worth (Yakeley, 2018).
1411 The understanding of what narcissism soon shifted with a focus on empirical un-
1412 derstandings of the individual. Researchers such as Jeffrey Young, who expanded
1413 on the work of Aaron Beck, theorized that the core beliefs of an individual along
1414 with negative self-schemas influence the individual to seek out or act in ways in
1415 line with a narcissistic personality (J. E. Young et al., 2006). Conceptualizations
1416 of narcissism would soon entail it to be an understanding of grandiose sense of
1417 self, fantastical beliefs of success and general superiority, along with a general
1418 lack of empathy (American Psychiatric Association, 2013; Okada, 2010; Yakeley,
1419 2018)./ The earliest understandings of narcissism were through Sigmund Freud.
1420 However, the term was first coined by Havelock Ellis who used the eponymous
1421 Narcissus myth in the explanation of narcissism. Freud would then publish the
1422 text *On Narcissism* to further our understanding of narcissism. Future under-
1423 standings of narcissism would develop from a social cognitive framework of the
1424 individual in relation to their environment. Such as Kernberg’s assessment that
1425 narcissism stems from an aggressive and conflict filled childhood affecting the
1426 child’s development and later aggression and envy towards others (Russell, 1985).

1427 **4.4 The present Experiments**

1428 Pathological narcissism at its core looks strikingly similar to self-esteem
1429 and in-turn a grandiose sense of self. Investigations at risky situations have looked
1430 at sexual self-esteem, exploratory experiment one. The present experiment seeks
1431 to expand to investigate the relationship between pathological narcissism and see
1432 which is a stronger predictor of risky sexual situations and riskiness in general.

5 References

- Abelson, R. P. (1981). Psychological status of the script concept. *American Psychologist*, 36(7), 715–729. <https://doi.org/10.1037/0003-066X.36.7.715>
- American Psychiatric Association. (2013). *Diagnostic and Statistical Manual of Mental Disorders* (Fifth Edition). American Psychiatric Association. <https://doi.org/10.1176/appi.books.9780890425596>
- Andersen, B. L., Cyranowski, J. M., & Espindle, D. (1994). *Women's sexual self-schema*. <https://doi.org/10.1037/0022-3514.67.6.1079>
- Andersen, B. L., Cyranowski, J. M., & Espindle, D. (1999). Men's sexual self-schema. *Journal of Personality and Social Psychology*, 76(4), 645–661. <https://doi.org/10.1037/0022-3514.76.4.645>
- Anderson, C. A., & Bushman, B. J. (2002). Human aggression. *Annual Review of Psychology*, 53(1), 27–51. <https://doi.org/10.1146/annurev.psych.53.100901.135231>
- Anderson, C., John, O. P., & Keltner, D. (2012). The personal sense of power. *Journal of Personality*, 80(2), 313–344. <https://doi.org/10.1111/j.1467-6494.2011.00734.x>
- Aristotle. (1984). *Complete works of aristotle, volume 2: the revised oxford translation*. Princeton University Press.
- Aust, F., & Barth, M. (2020). *papaja: Prepare reproducible APA journal articles with R Markdown* [R]. <https://github.com/crsh/papaja>
- Bareket, O., & Shnabel, N. (2020). Domination and objectification: men's motivation for dominance over women affects their tendency to sexually objectify women. *Psychology of Women Quarterly*, 44(1), 28–49. <https://doi.org/10.1177/0361684319871913>
- Barnett, G. D., & Mann, R. E. (2013). Cognition, empathy, and sexual offending. *Trauma, Violence, & Abuse*, 14(1), 22–33. <https://doi.org/10.1891/1548-3743.14.1.22>

1461 org/10.1177/1524838012467857

1462 Bastian, B., & Haslam, N. (2010). Excluded from humanity: the de-

1463 humanizing effects of social ostracism. *Journal of Experimental So-*

1464 *cial Psychology*, 46(1), 107–113. [https://doi.org/10.1016/j.jesp.](https://doi.org/10.1016/j.jesp.2009.06.022)

1465 2009.06.022

1466 Bastian, B., Jetten, J., Chen, H., Radke, H. R. M., Harding, J. F., &

1467 Fasoli, F. (2013). Losing our humanity: the self-dehumanizing conse-

1468 quences of social ostracism. *Personality & Social Psychology Bulletin*,

1469 39(2), 156–169. <https://doi.org/10.1177/0146167212471205>

1470 Bastian, B., Jetten, J., & Radke, H. R. M. (2012). Cyber-dehumanization:

1471 violent video game play diminishes our humanity. *Journal of Ex-*

1472 *perimental Social Psychology*, 48(2), 486–491. [https://doi.org/10.](https://doi.org/10.1016/j.jesp.2011.10.009)

1473 1016/j.jesp.2011.10.009

1474 Bernstein, R. (2020, February 22). The Paradox of Rodrigo Duterte. *The*

1475 *Atlantic*. [https://www.theatlantic.com/international/archive/](https://www.theatlantic.com/international/archive/2020/02/philippines-rodrigo-duterte-china/606754/)

1476 2020/02/philippines-rodrigo-duterte-china/606754/

1477 Bierstedt, R. (1950). An analysis of social power. *American Sociolog-*

1478 *ical Review*, 15(6), 730–738. JSTOR. [https://doi.org/10.2307/](https://doi.org/10.2307/2086605)

1479 2086605

1480 Breakwell, G. M. (2007, November). *The psychology of risk*. [https:](https://doi.org/10.1017/CB09780511819315)

1481 [//doi.org/10.1017/CB09780511819315](https://doi.org/10.1017/CB09780511819315)

1482 Bugental, D. B., & Shennum, W. (2002). Gender, power, and violence in

1483 the family. *Child Maltreatment*, 7(1), 55–63. [https://doi.org/10.](https://doi.org/10.1177/1077559502007001005)

1484 1177/1077559502007001005

1485 Bürkner, P.-C. (2017). brms: an R package for bayesian multilevel models

1486 using stan. *Journal of Statistical Software*, 80(1), 1–28. [https://doi.](https://doi.org/10.18637/jss.v080.i01)

1487 [org/10.18637/jss.v080.i01](https://doi.org/10.18637/jss.v080.i01)

1488 Bürkner, P.-C. (2018). Advanced bayesian multilevel modeling with the

1489 R package brms. *The R Journal*, 10(1), 395–411. [https://doi.org/](https://doi.org/10.32614/RJ-2018-017)
1490 10.32614/RJ-2018-017

1491 Byom, L. J., & Mutlu, B. (2013). Theory of mind: mechanisms, methods,
1492 and new directions. *Frontiers in Human Neuroscience*, 7. [https:](https://doi.org/10.3389/fnhum.2013.00413)
1493 [//doi.org/10.3389/fnhum.2013.00413](https://doi.org/10.3389/fnhum.2013.00413)

1494 Carmona-Gutierrez, D., Kainz, K., & Madeo, F. (2016). Sexually trans-
1495 mitted infections: old foes on the rise. *Microbial Cell*, 3(9), 361–362.
1496 <https://doi.org/10.15698/mic2016.09.522>

1497 Castro-Vázquez, G. (2000). Masculinity and condom use among mexi-
1498 can teenagers: the escuela nacional preparatoria no. 1's case. *Gen-*
1499 *der and Education*, 12(4), 479–492. [https://doi.org/10.1080/](https://doi.org/10.1080/09540250020004117)
1500 09540250020004117

1501 Chen, Z., & John, R. S. (2021). Decision heuristics and descriptive
1502 choice models for sequential high-stakes risky choices in the deal or
1503 no deal game. *Decision*, 8(3), 155–179. [https://doi.org/10.1037/](https://doi.org/10.1037/dec0000153)
1504 dec0000153

1505 Chiappori, P.-A., & Molina, J. A. (2019). *1 the intra-spousal balance of*
1506 *power within the family : cross-cultural evidence.*

1507 Costa-Lourenço, A. P. R. da, Barros dos Santos, K. T., Moreira, B. M.,
1508 Fracalanza, S. E. L., & Bonelli, R. R. (2017). Antimicrobial resistance
1509 in neisseria gonorrhoeae: history, molecular mechanisms and epidemi-
1510 ological aspects of an emerging global threat. *Brazilian Journal of Mi-*
1511 *crobiology*, 48(4), 617–628. [https://doi.org/10.1016/j.bjm.2017.](https://doi.org/10.1016/j.bjm.2017.06.001)
1512 06.001

1513 Cowan, N. (1999). An embedded-processes model of working memory. In
1514 A. Miyake & P. Shah (Eds.), *Models of Working Memory* (1st ed., pp.
1515 62–101). Cambridge University Press. [https://doi.org/10.1017/](https://doi.org/10.1017/CB09781139174909.006)
1516 CB09781139174909.006

- Crandall, A., Magnusson, B., Novilla, M., Novilla, L. K. B., & Dyer, W. (2017). Family financial stress and adolescent sexual risk-taking: the role of self-regulation. *Journal of Youth and Adolescence*, 46(1), 45–62. <https://doi.org/10.1007/s10964-016-0543-x>
- Cunningham, S. D., Kerrigan, D. L., Jennings, J. M., & Ellen, J. M. (2009). Relationships between perceived std-related stigma, std-related shame and std screening among a household sample of adolescents. *Perspectives on Sexual and Reproductive Health*, 41(4), 225–230. <https://doi.org/10.1363/4122509>
- CYRANOWSKI, J. M., AARESTAD, S. L., & ANDERSEN, B. L. (1999). The role of sexual self-schema in a diathesis–stress model of sexual dysfunction. *Applied & Preventive Psychology : Journal of the American Association of Applied and Preventive Psychology*, 8(3), 217–228. [https://doi.org/10.1016/S0962-1849\(05\)80078-2](https://doi.org/10.1016/S0962-1849(05)80078-2)
- de Sanjose, S., Cortés, X., Méndez, C., Puig-Tintore, L., Torné, A., Roura, E., Bosch, F. X., & Castellsague, X. (2008). Age at sexual initiation and number of sexual partners in the female spanish population: results from the AFRODITA survey. *European Journal of Obstetrics & Gynecology and Reproductive Biology*, 140(2), 234–240. <https://doi.org/10.1016/j.ejogrb.2008.04.005>
- Desiderato, L. L., & Crawford, H. J. (1995). Risky sexual behavior in college students: relationships between number of sexual partners, disclosure of previous risky behavior, and alcohol use. *Journal of Youth and Adolescence*, 24(1), 55–68. <https://doi.org/10.1007/BF01537560>
- Dickson, N., Paul, C., Herbison, P., & Silva, P. (1998). First sexual intercourse: age, coercion, and later regrets reported by a birth cohort. *BMJ*, 316(7124), 29–33. <https://doi.org/10.1136/bmj.316.7124.29>

- 1545 DiMaggio, P. (1997). Culture and cognition. *Annual Review of Sociology*,
1546 23(1), 263–287. <https://doi.org/10.1146/annurev.soc.23.1.263>
- 1547 Elder, W. B., Brooks, G. R., & Morrow, S. L. (2012). Sexual self-schemas
1548 of heterosexual men. *Psychology of Men & Masculinity*, 13(2), 166–
1549 179. <https://doi.org/10.1037/a0024835>
- 1550 Elder, W. B., Morrow, S. L., & Brooks, G. R. (2015). Sexual self-schemas
1551 of gay men: a qualitative investigation. *The Counseling Psychologist*,
1552 43(7), 942–969. <https://doi.org/10.1177/0011000015606222>
- 1553 Ellemers, N., van der Toorn, J., Paunov, Y., & van Leeuwen, T.
1554 (2019). The psychology of morality: A review and analysis of em-
1555 pirical studies published from 1940 through 2017. *Personality and So-*
1556 *cial Psychology Review*, 23(4), 332–366. [https://doi.org/10.1177/](https://doi.org/10.1177/1088868318811759)
1557 [1088868318811759](https://doi.org/10.1177/1088868318811759)
- 1558 Ellis, V., & High, S. (2004). Something more to tell you: gay, lesbian
1559 or bisexual young people’s experiences of secondary schooling. *British*
1560 *Educational Research Journal*, 30(2), 213–225. [https://doi.org/10.](https://doi.org/10.1080/0141192042000195281)
1561 [1080/0141192042000195281](https://doi.org/10.1080/0141192042000195281)
- 1562 Eskine, K. J., Kacinik, N. A., & Prinz, J. J. (2011). A bad taste
1563 in the mouth: gustatory disgust influences moral judgment. *Psy-*
1564 *chological Science*, 22(3), 295–299. [https://doi.org/10.1177/](https://doi.org/10.1177/0956797611398497)
1565 [0956797611398497](https://doi.org/10.1177/0956797611398497)
- 1566 Festinger, L. (1957). *A theory of cognitive dissonance* (pp. xi, 291). Stan-
1567 ford University Press.
- 1568 Finucane, M. L., Alhakami, A., Slovic, P., & Johnson, S.
1569 M. (2000). The affect heuristic in judgments of risks and
1570 benefits. *Journal of Behavioral Decision Making*, 13(1), 1–
1571 17. [https://doi.org/10.1002/\(SICI\)1099-0771\(200001/03\)13:](https://doi.org/10.1002/(SICI)1099-0771(200001/03)13:1%3C1::AID-BDM333%3E3.0.CO;2-S)
1572 [1%3C1::AID-BDM333%3E3.0.CO;2-S](https://doi.org/10.1002/(SICI)1099-0771(200001/03)13:1%3C1::AID-BDM333%3E3.0.CO;2-S)

- Gabry, J., & Cesnovar, R. (2021). *cmdstanr: R interface to “CmdStan”* [R]. <https://mc-stan.org/cmdstanr>, <https://discourse.mc-stan.org>
- Gannon, T. A. (2009). Social cognition in violent and sexual offending: an overview. *Psychology, Crime & Law*, 15(2-3), 97–118. <https://doi.org/10.1080/10683160802190822>
- Gesink, D., Whiskeyjack, L., Suntjens, T., Mihic, A., & McGilvery, P. (2016). Abuse of power in relationships and sexual health. *Child Abuse & Neglect*, 58, 12–23. <https://doi.org/10.1016/j.chiabu.2016.06.005>
- Glamorizing Dictators. (2018, February 22). *Towson University Journal of International Affairs*. <https://wp.towson.edu/iajournal/2018/02/21/glamorizing-dictators/>
- Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Koleva, S., & Ditto, P. H. (2011). Mapping the moral domain. *Journal of Personality and Social Psychology*, 101(2), 366–385. <https://doi.org/10.1037/a0021847>
- Greenberg, J., Pyszczynski, T., Solomon, S., Rosenblatt, A., & et al. (1990). Evidence for terror management theory II: the effects of mortality salience on reactions to those who threaten or bolster the cultural worldview. *Journal of Personality and Social Psychology*, 58(2), 308–318. <https://doi.org/10.1037/0022-3514.58.2.308>
- Greene, J. D. (2001). An fMRI investigation of emotional engagement in moral judgment. *Science*, 293(5537), 2105–2108. <https://doi.org/10.1126/science.1062872>
- Gwinn, J. D., Judd, C. M., & Park, B. (2013). Less power = less human? Effects of power differentials on dehumanization. *Journal of Experimental Social Psychology*, 49(3), 464–470. <https://doi.org/10.1016/j.jesp.2013.01.005>
- Haidt, J. (2001). The emotional dog and its rational tail: A social in-

1601 tuitionist approach to moral judgment. *Psychological Review*, 108(4),
 1602 814–834. <https://doi.org/10.1037/0033-295X.108.4.814>
 1603 Haslam, N., & Loughnan, S. (2014). Dehumanization and infrahu-
 1604 manization. *Annual Review of Psychology*, 65(1), 399–423. [https:](https://doi.org/10.1146/annurev-psych-010213-115045)
 1605 [//doi.org/10.1146/annurev-psych-010213-115045](https://doi.org/10.1146/annurev-psych-010213-115045)
 1606 Horberg, E. J., Oveis, C., Keltner, D., & Cohen, A. B. (2009). Disgust
 1607 and the moralization of purity. *Journal of Personality and Social Psy-*
 1608 *chology*, 97(6), 963–976. <https://doi.org/10.1037/a0017423>
 1609 Hyatt, C. S., Sleep, C. E., Lamkin, J., Maples-Keller, J. L., Sedikides, C.,
 1610 Campbell, W. K., & Miller, J. D. (2018). Narcissism and self-esteem:
 1611 A nomological network analysis. *PLOS ONE*, 13(8), e0201088. [https:](https://doi.org/gdzd3c)
 1612 [//doi.org/gdzd3c](https://doi.org/gdzd3c)
 1613 Ison, C. A., & Alexander, S. (2011). Antimicrobial resistance in neis-
 1614 seria gonorrhoeae in the UK: surveillance and management. *Expert*
 1615 *Review of Anti-Infective Therapy*, 9(10), 867–876. [https://doi.org/](https://doi.org/10.1586/eri.11.103)
 1616 [10.1586/eri.11.103](https://doi.org/10.1586/eri.11.103)
 1617 Johnson, M. W., & Bruner, N. R. (2012). The sexual discounting task:
 1618 HIV risk behavior and the discounting of delayed sexual rewards in
 1619 cocaine dependence. *Drug and Alcohol Dependence*, 123(1-3), 15–21.
 1620 <https://doi.org/10.1016/j.drugalcdep.2011.09.032>
 1621 Johnson, P. S., Herrmann, E. S., & Johnson, M. W. (2015). Opportunity
 1622 costs of reward delays and the discounting of hypothetical money and
 1623 cigarettes: OPPORTUNITY COSTS AND DISCOUNTING. *Journal*
 1624 *of the Experimental Analysis of Behavior*, 103(1), 87–107. [https:](https://doi.org/10.1002/jeab.110)
 1625 [//doi.org/10.1002/jeab.110](https://doi.org/10.1002/jeab.110)
 1626 Kahneman, D., & Tversky, A. (1972). Subjective probability: A judgment
 1627 of representativeness. *Cognitive Psychology*, 3(3), 430–454. [https:](https://doi.org/cmf8m8)
 1628 [//doi.org/cmf8m8](https://doi.org/cmf8m8)

- Kilimnik, C. D., Boyd, R. L., Stanton, A. M., & Meston, C. M. (2018). Identification of nonconsensual sexual experiences and the sexual self-schemas of women: implications for sexual functioning. *Archives of Sexual Behavior*, 47(6), 1633–1647. <https://doi.org/10.1007/s10508-018-1229-0>
- Kim, H. M., & Miller, L. C. (2020). Are insecure attachment styles related to risky sexual behavior? A meta-analysis. *Health Psychology: Official Journal of the Division of Health Psychology, American Psychological Association*, 39(1), 46–57. <https://doi.org/10.1037/hea0000821>
- King, A. J., Johnson, D. D. P., & Van Vugt, M. (2009). The origins and evolution of leadership. *Current Biology*, 19(19), R911–R916. <https://doi.org/10.1016/j.cub.2009.07.027>
- Kirby, D. B., Laris, B. A., & Roller, L. A. (2007). Sex and HIV education programs: their impact on sexual behaviors of young people throughout the world. *Journal of Adolescent Health*, 40(3), 206–217. <https://doi.org/10.1016/j.jadohealth.2006.11.143>
- Kirby, M. (2021). North Korea on the Brink of the Biden Administration: Human Rights, Peace, and Security. *Indiana International & Comparative Law Review*, 31(2), 309–327. <http://journals.iupui.edu/index.php/iiclr/article/view/25607>
- Kouchaki, M., Dobson, K. S. H., Waytz, A., & Kteily, N. S. (2018). The link between self-dehumanization and immoral behavior. *Psychological Science*, 29(8), 1234–1246. <https://doi.org/10.1177/0956797618760784>
- Kühberger, A., & Tanner, C. (2009). Risky choice framing: task versions and a comparison of prospect theory and fuzzy-trace theory. *Journal of Behavioral Decision Making*, 23(3), 314–329. <https://doi.org/10.1002/bdm.624>

- Laakasuo, M., Sundvall, J., & Drosinou, M. (2017). Individual differences in moral disgust do not predict utilitarian judgments, sexual and pathogen disgust do. *Scientific Reports*, 7(1), 45526. <https://doi.org/10.1038/srep45526>
- Lammers, J., & Stapel, D. A. (2011). Power increases dehumanization. *Group Processes & Intergroup Relations*, 14(1), 113–126. <https://doi.org/10.1177/1368430210370042>
- MacPhail, C., & Campbell, C. (2001). “I think condoms are good but, aai, I hate those things”: *Social Science & Medicine*, 52(11), 1613–1627. [https://doi.org/10.1016/S0277-9536\(00\)00272-0](https://doi.org/10.1016/S0277-9536(00)00272-0)
- Makowski, D., Ben-Shachar, M., & Ludecke, D. (2019). bayestestR: Describing Effects and their Uncertainty, Existence and Significance within the Bayesian Framework. *Journal of Open Source Software*, 4(40). <https://doi.org/10.21105/joss.01541>
- Malamuth, N. M., Heavey, C. L., & Linz, D. (1996). The confluence model of sexual aggression. *Journal of Offender Rehabilitation*, 23(3-4), 13–37. https://doi.org/10.1300/J076v23n03_03
- Malamuth, N. M., Linz, D., Heavey, C. L., Barnes, G., & Acker, M. (1995). Using the confluence model of sexual aggression to predict men’s conflict with women: A 10-year follow-up study. *Journal of Personality and Social Psychology*, 69(2), 353–369. <https://doi.org/10.1037/0022-3514.69.2.353>
- Maner, J. K., & Case, C. R. (2016). Dominance and prestige. In *Advances in Experimental Social Psychology* (Vol. 54, pp. 129–180). Elsevier. <https://doi.org/10.1016/bs.aesp.2016.02.001>
- Marcus, D. K., Zeigler-Hill, V., Mercer, S. H., & Norris, A. L. (2014). The psychology of spite and the measurement of spitefulness. *Psychological Assessment*, 26(2), 563–574. <https://doi.org/10.1037/a0036039>

- 1685 Marcus, G. (2000). Emotions in politics. *Annual Review of Political Sci-*
1686 *ence - ANNU REV POLIT SCI*, 3, 221–250. [https://doi.org/10.](https://doi.org/10.1146/annurev.polisci.3.1.221)
1687 [1146/annurev.polisci.3.1.221](https://doi.org/10.1146/annurev.polisci.3.1.221)
- 1688 Marshall, W. L., Hudson, S. M., & Hodgkinson, S. (1993). The importance
1689 of attachment bonds in the development of juvenile sex offending. In
1690 *The juvenile sex offender*. (pp. 164–181). Guilford Press.
- 1691 Mercer, C. H., Tanton, C., Prah, P., Erens, B., Sonnenberg, P., Clifton,
1692 S., Macdowall, W., Lewis, R., Field, N., Datta, J., Copas, A. J.,
1693 Phelps, A., Wellings, K., & Johnson, A. M. (2013). Changes in
1694 sexual attitudes and lifestyles in britain through the life course and
1695 over time: findings from the national surveys of sexual attitudes
1696 and lifestyles (natsal). *The Lancet*, 382(9907), 1781–1794. [https:](https://doi.org/10.1016/S0140-6736(13)62035-8)
1697 [//doi.org/10.1016/S0140-6736\(13\)62035-8](https://doi.org/10.1016/S0140-6736(13)62035-8)
- 1698 Moll, J., Zahn, R., de Oliveira-Souza, R., Krueger, F., & Grafman, J.
1699 (2005). The neural basis of human moral cognition. *Nature Reviews*
1700 *Neuroscience*, 6(10), 799–809. <https://doi.org/10.1038/nrn1768>
- 1701 Nationale (Paris), C. (1793). *Collection générale des décrets rendus par la*
1702 *convention nationale*. chez Baudouin.
- 1703 Okada, R. (2010). The relationship between vulnerable narcissism and
1704 aggression in japanese undergraduate students. *Personality and Indi-*
1705 *vidual Differences*, 49(2), 113–118. <https://doi.org/c73zz7>
- 1706 Papanek, H. (1972). Pathology of power striving and its
1707 treatment. *Journal of Individual Psychology; Chicago, Ill.*,
1708 28(1), 25–32. [http://search.proquest.com/docview/1303447697/](http://search.proquest.com/docview/1303447697/citation/C0139F0ECA044577PQ/1)
1709 [citation/C0139F0ECA044577PQ/1](http://search.proquest.com/docview/1303447697/citation/C0139F0ECA044577PQ/1)
- 1710 Petersen, R. M., Dubuc, C., & Higham, J. P. (2018). Facial displays of
1711 dominance in non-human primates. In C. Senior (Ed.), *The Facial*
1712 *Displays of Leaders* (pp. 123–143). Springer International Publishing.

1713 https://doi.org/10.1007/978-3-319-94535-4_6

1714 Pew Research Center. (2019). *Views on race in america 2019*. Pew
 1715 Research Center, Washinton, D.C. [https://www.pewresearch.org/
 1716 social-trends/2019/04/09/race-in-america-2019/](https://www.pewresearch.org/social-trends/2019/04/09/race-in-america-2019/)

1717 Pleck, J., Sonenstein, F., & Ku, L. (1993). Masculinity ideology: its
 1718 impact on adolescent males' heterosexual relationships. *Journal of
 1719 Social Issues*, 49(3), 19. [https://doi.org/10.1111/j.1540-4560.
 1720 1993.tb01166.x](https://doi.org/10.1111/j.1540-4560.1993.tb01166.x)

1721 Prolific Academic. (2018). *How do participants find out about my study?*
 1722 [https://researcher-help.prolific.co/hc/en-gb/articles/
 1723 360009221253-How-do-participants-find-out-about-my-study-](https://researcher-help.prolific.co/hc/en-gb/articles/360009221253-How-do-participants-find-out-about-my-study-)

1724 Pulerwitz, J., Gortmaker, S., & DeJong, W. (2000). Measuring sexual
 1725 relationships in HIV/STD research. *Sex Roles*, 42(7), 637–660. [https:
 1726 //doi.org/10.1023/A:1007051506972](https://doi.org/10.1023/A:1007051506972)

1727 R Core Team. (2021). *R: A language and environment for statistical
 1728 computing* [R]. R Foundation for Statistical Computing. [https://
 1729 www.R-project.org/](https://www.R-project.org/)

1730 Rosenblatt, A., Greenberg, J., Solomon, S., Pyszczynski, T., & Lyon,
 1731 D. (1989). Evidence for terror management theory: I. the effects of
 1732 mortality salience on reactions to those who violate or uphold cultural
 1733 values. *Journal of Personality and Social Psychology*, 57(4), 681–690.
 1734 <https://doi.org/10.1037/0022-3514.57.4.681>

1735 Rosenthal, L., Levy, S. R., & Earnshaw, V. A. (2012). Social domi-
 1736 nance orientation relates to believing men should dominate sexually,
 1737 sexual self-efficacy, and taking free female condoms among under-
 1738 graduate women and men. *Sex Roles*, 67(11-12), 659–669. [https:
 1739 //doi.org/10.1007/s11199-012-0207-6](https://doi.org/10.1007/s11199-012-0207-6)

1740 Russell, G. A. (1985). Narcissism and the narcissistic personality disorder:

1741 A comparison of the theories of Kernberg and Kohut. *British Journal*
1742 *of Medical Psychology*, 58(2), 137–148. [https://doi.org/10.1111/](https://doi.org/10.1111/j.2044-8341.1985.tb02626.x)
1743 [j.2044-8341.1985.tb02626.x](https://doi.org/10.1111/j.2044-8341.1985.tb02626.x)

1744 Schaich Borg, J., Lieberman, D., & Kiehl, K. A. (2008). Infection,
1745 incest, and iniquity: investigating the neural correlates of disgust
1746 and morality. *Journal of Cognitive Neuroscience*, 20(9), 1529–1546.
1747 <https://doi.org/10.1162/jocn.2008.20109>

1748 Shearer, C. L., Hosterman, S. J., Gillen, M. M., & Lefkowitz, E. S.
1749 (2005). Are traditional gender role attitudes associated with risky sex-
1750 ual behavior and condom-related beliefs? *Sex Roles*, 52(5-6), 311–324.
1751 <https://doi.org/10.1007/s11199-005-2675-4>

1752 Sidanius, J., Levin, S., Liu, J., & Pratto, F. (2000). Social dominance
1753 orientation, anti-egalitarianism and the political psychology of gender:
1754 an extension and cross-cultural replication. *European Journal of Social*
1755 *Psychology*, 30(1), 41–67. [https://doi.org/10.1002/\(SICI\)1099-](https://doi.org/10.1002/(SICI)1099-0992(200001/02)30:1%3C41::AID-EJSP976%3E3.0.CO;2-0)
1756 [0992\(200001/02\)30:1%3C41::AID-EJSP976%3E3.0.CO;2-0](https://doi.org/10.1002/(SICI)1099-0992(200001/02)30:1%3C41::AID-EJSP976%3E3.0.CO;2-0)

1757 Smith, D. L. (2016). Paradoxes of dehumanization. *Social Theory*
1758 *and Practice*, 42(2), 416–443. JSTOR. [https://doi.org/10.5840/](https://doi.org/10.5840/soctheorpract201642222)
1759 [soctheorpract201642222](https://doi.org/10.5840/soctheorpract201642222)

1760 Snell, W. E., & Papini, D. R. (1989). The sexuality scale: an instrument to
1761 measure sexual-esteem, sexual-depression, and sexual-preoccupation.
1762 *The Journal of Sex Research*, 26(2), 256–263. [https://doi.org/10.](https://doi.org/10.1080/00224498909551510)
1763 [1080/00224498909551510](https://doi.org/10.1080/00224498909551510)

1764 Stan Development Team. (2020). *RStan: the R interface to stan* (Version
1765 2.26.1) [R]. <https://mc-stan.org/>

1766 Suessenbach, F., Loughnan, S., Schönbrodt, F. D., & Moore, A. B.
1767 (2019). The dominance, prestige, and leadership account of so-
1768 cial power motives. *European Journal of Personality*, 33(1), 7–33.

- 1769 <https://doi.org/10.1002/per.2184>
- 1770 Tangney, J. P., Miller, R. S., Flicker, L., & Barlow, D. H. (1996). Are
1771 shame, guilt, and embarrassment distinct emotions? *Journal of Per-*
1772 *sonality and Social Psychology*, 70(6), 1256–1269. [https://doi.org/](https://doi.org/10.1037/0022-3514.70.6.1256)
1773 [10.1037/0022-3514.70.6.1256](https://doi.org/10.1037/0022-3514.70.6.1256)
- 1774 Tangney, J. P., Stuewig, J., & Mashek, D. J. (2006). Moral emotions
1775 and moral behavior. *Annual Review of Psychology*, 58(1), 345–372.
1776 <https://doi.org/10.1146/annurev.psych.56.091103.070145>
- 1777 Testa, M., Hoffman, J. H., Lucke, J. F., & Pagnan, C. E. (2015). Mea-
1778 suring sexual aggression perpetration in college men: A comparison
1779 of two measures. *Psychology of Violence*, 5(3), 285–293. [https:](https://doi.org/10.1037/a0037584)
1780 [//doi.org/10.1037/a0037584](https://doi.org/10.1037/a0037584)
- 1781 Tsoi, L., Dungan, J. A., Chakroff, A., & Young, L. L. (2018). Neural
1782 substrates for moral judgments of psychological versus physical harm.
1783 *Social Cognitive and Affective Neuroscience*, 13(5), 460–470. [https:](https://doi.org/10.1093/scan/nsy029)
1784 [//doi.org/10.1093/scan/nsy029](https://doi.org/10.1093/scan/nsy029)
- 1785 Tuoyire, D. A., Anku, P. J., Alidu, L., & Amo-Adjei, J. (2018). Timing
1786 of first sexual intercourse and number of lifetime sexual partners in
1787 sub-saharan africa. *Sexuality & Culture*, 22(2), 651–668. [https://](https://doi.org/10.1007/s12119-017-9488-9)
1788 doi.org/10.1007/s12119-017-9488-9
- 1789 Tybur, J. M., Lieberman, D., & Griskevicius, V. (2009). Microbes, mating,
1790 and morality: individual differences in three functional domains of
1791 disgust. *Journal of Personality and Social Psychology*, 97(1), 103–122.
1792 <https://doi.org/10.1037/a0015474>
- 1793 Uhlmann, E. L., Zhu, L. (Lei)., & Tannenbaum, D. (2013). When it
1794 takes a bad person to do the right thing. *Cognition*, 126(2), 326–334.
1795 <https://doi.org/10.1016/j.cognition.2012.10.005>
- 1796 Unesco. (2015). *Emerging evidence, lessons and practice in comprehensive*

- 1797 *sexuality education: a global review 2015*.
- 1798 Van Vugt, M. (2006). Evolutionary origins of leadership and followership.
- 1799 *Personality and Social Psychology Review*, 10(4), 354–371. https://doi.org/10.1207/s15327957pspr1004_5
- 1800
- 1801 Vincent, W., Gordon, D. M., Campbell, C., Ward, N. L., Albritton, T., &
- 1802 Kershaw, T. (2016). Adherence to traditionally masculine norms and
- 1803 condom-related beliefs: emphasis on african american and hispanic
- 1804 men. *Psychology of Men & Masculinity*, 17(1), 42–53. <https://doi.org/10.1037/a0039455>
- 1805
- 1806 Volpe, E. M., Hardie, T. L., Cerulli, C., Sommers, M. S., & Morrison-
- 1807 Beedy, D. (2013). What’s age got to do with it? Partner age difference,
- 1808 power, intimate partner violence, and sexual risk in urban adolescents.
- 1809 *Journal of Interpersonal Violence*, 28(10), 2068–2087. <https://doi.org/10.1177/0886260512471082>
- 1810
- 1811 Vugt, M. van, & Ronay, R. (2014). The evolutionary psychology of leader-
- 1812 ship: theory, review, and roadmap. *Organizational Psychology Review*,
- 1813 4(1), 74–95. <https://doi.org/10.1177/2041386613493635>
- 1814
- 1815 Weber, E. U., Blais, A.-R., & Betz, N. E. (2002). A domain-specific risk-
- 1816 attitude scale: measuring risk perceptions and risk behaviors. *Journal*
- 1817 *of Behavioral Decision Making*, 15(4), 263–290. <https://doi.org/10.1002/bdm.414>
- 1818
- 1819 Williams, M. J., Gruenfeld, D. H., & Guillory, L. E. (2017). Sexual ag-
- 1820 gression when power is new: effects of acute high power on chronically
- 1821 low-power individuals. *Journal of Personality and Social Psychology*,
- 1822 112(2), 201–223. <https://doi.org/10.1037/pspi0000068>
- 1823
- 1824 Winter, D. G. (1988). The power motive in women—and men. *Journal*
- of Personality and Social Psychology*, 54(3), 510–519. <https://doi.org/10.1037/0022-3514.54.3.510>

- 1825 Winter, D. G. (1993). Power, affiliation, and war: three tests of a moti-
1826 vational model. *Journal of Personality and Social Psychology*, 65(3),
1827 532–545. <https://doi.org/10.1037/0022-3514.65.3.532>
- 1828 Witkower, Z., Tracy, J. L., Cheng, J. T., & Henrich, J. (2020). Two
1829 signals of social rank: prestige and dominance are associated with dis-
1830 tinct nonverbal displays. *Journal of Personality and Social Psychology*,
1831 118(1), 89–120. <https://doi.org/10.1037/pspi0000181>
- 1832 World Health Organization. (2018). *Report on global sexually transmitted*
1833 *infection surveillance. 2018. WHO.* [https://apps.who.int/iris/](https://apps.who.int/iris/bitstream/handle/10665/277258/9789241565691-eng.pdf?ua=1)
1834 [bitstream/handle/10665/277258/9789241565691-eng.pdf?ua=1](https://apps.who.int/iris/bitstream/handle/10665/277258/9789241565691-eng.pdf?ua=1)
- 1835 Worley, T., & Samp, J. (2014). Exploring the associations between rela-
1836 tional uncertainty, jealousy about partner’s friendships, and jealousy
1837 expression in dating relationships. *Communication Studies*, 65(4),
1838 370–388. <https://doi.org/10.1080/10510974.2013.833529>
- 1839 Yakeley, J. (2018). Current understanding of narcissism and narcissistic
1840 personality disorder. *BJPsych Advances*, 24(5), 305–315. [https://](https://doi.org/gfwddh)
1841 doi.org/gfwddh
- 1842 Yeung, N., & Summerfield, C. (2012). Metacognition in human decision-
1843 making: confidence and error monitoring. *Philosophical Transactions*
1844 *Of The Royal Society B-Biological Sciences*, 367(1594), 1310–1321.
1845 <https://doi.org/10.1098/rstb.2011.0416>
- 1846 Young, J. E., Klosko, J. S., & Weishaar, M. E. (2006). *Schema Therapy:*
1847 *A Practitioner’s Guide* (1st edition). Guilford Press.
- 1848 Young, L., Cushman, F., Hauser, M., & Saxe, R. (2007). The neural
1849 basis of the interaction between theory of mind and moral judgment.
1850 *Proceedings of the National Academy of Sciences*, 104(20), 8235–8240.
1851 <https://doi.org/10.1073/pnas.0701408104>