
Add complete departmental affiliations for each author here. Each new line herein must be indented, like this line.

Enter author note here.

The authors made the following contributions. Ithurburn, Andrew: .

Correspondence concerning this article should be addressed to Ithurburn, Andrew, 7 George Square, Edinburgh, EH8 9JZ. E-mail: a.ithurburn@sms.ed.ac.uk

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

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Andrew Ithurburn



13

Doctor of Philosophy

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THE UNIVERSITY OF EDINBURGH

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66 1.1 Literature Review

67 1.1.1 *General Introduction*

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

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

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

1.1.2 Who is at risk?

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

119 they later may meet an STI (Andersen et al., 1994, 1999; Elder et al., 2015;
120 Gesink et al., 2016). Aggression, in the cognitive sense, also has an impact as
121 well demonstrating a dominance over another person that may cause difficulties
122 in their own ability to make decisions on their sexual health (Malamuth et al.,
123 1996; Williams et al., 2017).

124 Aggression is one method of exerting control over another individual.
125 Overall, the exertion of control itself denotes a power disparity between parties
126 which varies in effects, methods, and domains. [citation]. For example, most re-
127 search has looked at power-over or one person controlling the behavior of another
128 person. This area of research connects the cognitive explanation to behavioral
129 outcomes. Research in power also includes looking at minority populations and
130 aspects of power over to help explain the increased prevalence of certain STIs
131 by discussing and researching certain power dynamics [citations]. The institu-
132 tional support of those power dynamics often reflect power based on age, gender,
133 political orientation, sexual orientation and gender identity (C. A. Anderson &
134 Bushman, 2002; Chiappori & Molina, 2019; Volpe et al., 2013; Winter, 1988).
135 Investigations of the power structure of a family unit has shown to have some
136 interesting consequences on sexual health depending on the type of parenting
137 style and parental attachment [Bugental and Shennum (2002); Chiappori and
138 Molina (2019); Kim and Miller (2020); citations]. A new area of research coming
139 out of power and cognition is the phenomenon where an individual will harm
140 themselves in some way to also inflict harm on another. This type of behavior
141 has been researched extensively in the animal kingdom and is known as spiteful
142 behavior in that one brings down their own wellbeing to spite the other person.
143 There would be interesting avenues to research how spiteful thinking may affect
144 an individual in how they choose one course of action over another. ### Cur-
145 rent Methodology An interesting aspect of the power dynamics and cognition is
146 the moral aspect of decision-making. Often, sexually transmitted infections and

147 risky sexual behavior are used as examples to discuss moral issues. Methods at
148 understanding these situations and other moral issues are through dilemmas or
149 vignettes where individuals are presented with a short scenario and given the
150 opportunity to choose one outcome over another (Ellemers et al., 2019). A trade-
151 mark example is the trolley car experiment where there is a runaway trolley car
152 that is going towards five people (Greene, 2001). The decision is thus, allow the
153 trolley to careen towards the five people or you could divert the trolley by pushing
154 and sacrificing a large man for the sake of the other five. This type of dilemma
155 poses an interesting method of understanding how and what the decision maker
156 would choose. The researcher can then change the dilemma on its severity and
157 complexity. There could also be a change in situation and the types of individuals
158 that are at risk. Individual choice tasks investigating risky sexual behaviors and
159 STIs could be furthered with investigating the moral decision-making aspect of
160 those issues. Current STI research has focused on methods of ways of curbing why
161 individuals act a certain way when presented with a risky sexual situation (D. B.
162 Kirby et al., 2007). Current methods have shown mixed results. In many coun-
163 tries, how people are taught about risk and sex can vary wildly (Unesco, 2015).
164 For example, some countries may have one standard that is a mix of religious
165 and scientific findings of STIs. While others may not even have a formal sexual
166 education program. Some aspects of sexual activity are not even discussed, for
167 example non-heterosexual sex is not always present in education (Ellis & High,
168 2004). This becomes problematic in that men who have sex with men tend to be
169 more at risk to contracting an STI than their peers who engage in heterosexual
170 intercourse. There has also been a lot of research in STI rates. Evidence by
171 governments and international health organizations constantly partnering with
172 universities and healthcare providers to collect new incidences of STIs. There
173 might be one way of researching the topic however, it might not look at all the
174 aspects. Some may be more focused on the outcome while ignoring the causes

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

178 1.2 Risky Sexual Behaviors and STIs

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

185 There is a large array of different sexually transmitted infections. Cur-
186 rently, there are eight common types of STIs, chlamydia, gonorrhea, trichomo-
187 niasis, genital warts, genital herpes, pubic lice, scabies, and syphilis (Carmona-
188 Gutierrez et al., 2016), chlamydia being the most common. Treatment for these
189 STIs can range from a simple course of antibiotics such as is the case with chlamy-
190 dia or gonorrhea. Conversely, treatment for syphilis or human immunodeficiency
191 virus [HIV], can be increasingly more involved, cause difficulty in daily life, and
192 have higher costs [citation]. Globally, 37.9 million people are living with HIV
193 [104,000 in the United Kingdom], with 1.7 million being under the age of 15
194 years old (Ison & Alexander, 2011). The treatment for HIV currently is through
195 antiretroviral medication, which is often a combination of multiple medications
196 to account for the high adaptability of the virus (Costa-Lourenço et al., 2017).

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

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

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

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

230 colleagues investigated the age at first sexual intercourse and found that women
231 that had their first sexual intercourse before 16 years-old were more likely to
232 report having contracted an STI. In the United Kingdom, age at first heterosexual
233 intercourse has decreased over the last 70 years (Mercer et al., 2013). Mercer and
234 colleagues conducted a longitudinal analysis of age at first sexual intercourse by
235 separating individuals into birth cohorts. Individuals age 65-74 years reported
236 their age at first heterosexual intercourse at 18 years. Every ten years that number
237 has steadily decreased by one with the most recent being 16 years old. Thirty
238 percent of individuals between the ages of 16-24 report have had heterosexual
239 intercourse before the age of sixteen.

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

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

262 The social effects of sexuality in general influence how people see them-
263 selves. For gay men in particular there is not just the social stigma that some
264 may have of homosexuality, within the gay community there are some that are
265 expected to be promiscuous or appear to be promiscuous (Elder et al., 2015). In
266 a study based on grounded theory, Elder and colleagues asked gay men all aspects
267 of sexuality to discover and investigate their sexual schemas. A sexual schema
268 is, “a generalization about the sexual aspects of oneself.” (Elder et al., 2015, pg.
269 943). The effects of negative sexual self-schema are also seen in bisexual and
270 straight men and women (Andersen et al., 1994; CYRANOWSKI et al., 1999;
271 Elder et al., 2012, 2015). Having poor sexual self-schema can result in women
272 having issues with sexual desire and an inability of reaching orgasm while in men
273 can result in climaxing too early and erectile dysfunction (CYRANOWSKI et al.,
274 1999; Kilimnik et al., 2018). Long lasting impairments can often lead to more
275 psychological issues.

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

286 1.3 Moral Judgment and Decision-Making

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

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

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

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

342 first of a series of experiments Rosenblatt and colleagues found that participants
343 that were reminded of their mortality judged prostitutes more harshly, more so
344 if the participants already had negative opinions on prostitution. This was also
345 seen conversely with heroes that follow the cultural norms. Those participants
346 advocated for a larger reward for those individuals (Rosenblatt et al., 1989). The
347 already held opinions were further investigated to where Christians were asked
348 to report their impressions of Christian and Jewish individuals after mortality
349 became salient. Those that were a member of the in-group, Christian, were more
350 likely to be regarded as more positive than their out-group counterparts, Jewish
351 individuals (Greenberg et al., 1990). In-group bias is an oft studied concept in
352 psychological research. Mortality salience and moral violations tend to increase
353 the strength of the in-group bias and then moral judgement and condemnation
354 [citation].

355 When a person does a negative action, the reason for the action is often
356 judged and assumed. An action is commonly seen as being intentional when
357 the individual actively does the action directly. However, intentionality becomes
358 problematic participants have already had negative evaluations of the individ-
359 ual. In an experiment where participants were asked to judge the culpability of
360 an airline passenger that was forced by high-jackers to kill another passenger,
361 the high-jackers were the external force forcing the passenger to commit murder.
362 However, when the participants were told that the passenger already wanted to
363 kill that passenger before the hijacking was occurring, they were judged as more
364 culpable. With or without the internal motivation of wanting to already kill the
365 other passenger, the resulting death still occurs. When participants were given
366 a, less vivid, story of a manager that was only mistreated a black employee and
367 another story of a non-bigoted manager that was mistreating all of their employ-
368 ees, participants judged the bigoted manager more negatively. Even though there
369 were differences in those affected between the managers, participants already held

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

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

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

398 or guilt is dependent on whether they experience the former or the latter. There
399 are often attempts to amend the situation when individuals have violated moral
400 norms. Depending on the self-evaluative emotion that is being felt, people will
401 make amends to try to change the situation or they may hide it (Tangney et al.,
402 1996). Guilt is the former and shame is the latter. In most cases individuals that
403 are feeling shame will attempt to ignore their moral violation where they will deny
404 or evade the situation that is causing them shame. Conversely, people with guilt
405 are often motivated by those negative feelings to fix the situation that caused
406 them to feel the guilt. Guilt is often feeling negativity towards a specific action
407 while feeling ashamed or shame is usually a reflection of the entire self [citations].
408 Thus, in relation to how to repair the guilt inducing act, it would appear to be
409 more manageable if the inducing situation was a singular event rather than a
410 feeling of the entire self. Participants that were prompted to feel shame were less
411 likely to express empathy for someone with a disability (Marschall, 1998 as cited
412 in Tangney et al., 2006). When people feel a sense of shame, they self-evaluate
413 and reflect on themselves. This hinders the empathy process that would require
414 them to focus their attention on the emotions of another person.

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

424 1.4 Power

425 A common denominator in research on the dark personality and moral
426 judgment is the influence of power. To define power, one would have to first
427 define the actor and the recipient of the power. Therefore, there is either power-
428 over, power-to, and power-with. Each aspect has their own different consequences
429 [citation]. Power-over is when there is one individual, the one with power, which
430 wields control over a subordinate individual [citation]. Power-to is when an in-
431 dividual of privilege uses their status and power to control and enact a certain
432 consequence [citation]. Finally, power-with is an interesting concept where a per-
433 son of power uses their own power to lift or elevate someone without power to a
434 power position [citation]. This is often seen in community projects where some-
435 one in power goes into a troubled community and facilitates the situation so that
436 those that have less power can have their voices be heard. Power also has var-
437 ious sources each with their own complex consequences: institutional, cultural,
438 gender, age, ethnicity, orientation, and gender-identity [citations]. Some sources
439 of power compound on one another to increase the level of power over other sin-
440 gular sources of power. For example, in many areas of the world a straight white
441 cisgender man would hold the most power relative to other individuals.

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

451 Early discussions of power descended from Greek and Roman political

452 philosophy (Aristotle, 1984). Greek Philosopher, Plato's brothers Glaucon and
453 Adeimantus discuss the viability or requirement of citizens being just and lawful if
454 they are able to escape conviction because of some social power or fortune (Aris-
455 totle, 1984). Aristotle continued the discussion by posing the questions, "There is
456 also doubt as to what is to be the supreme power in the state: Is it the multitude?
457 Or the wealthy? Or the good?..." (Aristotle, 1984). Power discussions such as
458 that by Aristotle point to what is the source of someone's power. Does the power
459 come from the majority? Does it come from money? Does it come from those
460 that are just? Each source of power has different effects on those that are gov-
461 erned by those with that power. Polybius of Greece discussed how a constitution
462 should be created and power should be delineated. Polybius power should be
463 split between multiple groups, each with a different form of power and distinct
464 genre to wield that power [citation]. Power continued to be discussed well beyond
465 the Greek philosophers and continued by political researchers and philosophers.
466 Discussions of power soon developed into research on how it influences at the
467 community level.

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

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

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

496 In psychology, it was originally conceived that power corrupted individ-
497 uals exemplified by the Stanford prison experiment where “regular” individuals
498 were instructed to play the prison guards of a simulated prison. Similar indi-
499 viduals were instructed to portray the prisoners [citation]. Zimbardo, the lead
500 researcher for the experiment, soon noted that the individuals that portrayed the
501 prison guards became aggressive with the prisoners. They verbally and physically
502 assault them. The experiment was halted to stop any more damage from occur-
503 ring. News spread of the results of the experiment and power was seen as causing
504 or influencing the “prison guards” to become aggressive and abuse towards the
505 “prisoners.” However, the nature of the participants became into question [cita-
506 tion]. Later researchers noted that there could have been a self-selection bias of
507 the participants. The experiment was advertised such that the prison experiment

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

514 Throughout political history individuals that have reached powerful posi-
515 tions on multiple occasions have given some powerful people the outlet to express
516 their prejudiced and problematic beliefs [citation]. Fear of communist infiltration
517 in the United States caused many fears and blacklisting was a frequent practice.
518 Joseph McCarthy, a Wisconsin senator, would soon use his power as a legisla-
519 tor/senator [citation]. McCarthy would call individuals to the front of the House
520 Un-American Activities Committee because they were suspected of being spies
521 for the Soviet Union. McCarthy and the committee used strong arm tactics and
522 would often threaten individuals brought in front of the committee. Many in-
523 dividuals brought forward often had their lives irrevocably changed [citation].
524 Soon Senator Margaret Chase Smith and six others condemned McCarthy for his
525 actions and tactics. McCarthy was soon censured, and the House Un-American
526 Activities Committee was disbanded. The political issue of power being used
527 as an outlet for prejudiced and authoritarianism became apparent recently after
528 the 2016 United States Presidential Election [citation]. Donald Trump's political
529 exploits would soon highlight his past and present use of power and his uneth-
530 ical dealings. Often Donald Trump would use his power for personal gain and
531 to express his prejudicial and racist beliefs. Examples range from in the 1990's
532 Donald Trump advocated for the Central Park Five, five African-American men
533 accused of raping and murdering a young White woman in Central Park, to be
534 put to death [citation]. However, DNA evidence exonerated on the men of the
535 crime [citation]. Recently, Donald Trump on the campaign trail accused Mexico

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

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

564 The behaviors of Ms. C and Mr. A are not the only examples of individu-
565 als having power over another person or being subjected to the power over them.
566 Power-over has occurred throughout human history and is ingrained in all cultures
567 [citation]. Institutional power-over is quite common cross-culturally. Contracep-
568 tion and control over one's own reproductive system is a prescient debate globally
569 [citation]. In 1960 and 1963 Enovid was approved for use in the United States and
570 United Kingdom respectively [citation]. Doses for contraception early on were of-
571 ten high and news of multiple deaths was reported widely. Cases were brought
572 forward to control the use of contraception. The Roman Catholic Church's stance
573 on hormonal contraception shifted from permission to outlawing anything that
574 would be believed as stopping the ability to propagate [citation]. Interestingly
575 in 1989 researchers working for Pfizer in the United Kingdom were researching a
576 new drug that would aid in treating heart conditions [citations]. The researchers
577 soon discovered sildenafil also could treat erectile dysfunction. Ten years later,
578 sildenafil, brand name Viagra, would be patented and approved for use for the
579 primary treatment for erectile dysfunction [citation]. The same individuals that
580 were trying to reduce the use of female contraception were not trying to do the
581 same for Viagra. The Japanese government and officials had similar attempts
582 to quell the use of female contraception while not doing the same for erectile
583 dysfunction treatments [citation].

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

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

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

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

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

630 1.5 Cognition

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

640 The first step at acquiring new knowledge is interacting with the environ-
641 ment. One explanation that has been garnering more cognitive and biological
642 attention is from Dr. Nelson Cowan’s integrated working memory model (Cowan,
643 1999). In the integrated working memory model there are four key areas in at-
644 taining new information: [1] a brief sensory store, [2] a long term store, [3] the
645 focus of attention, [4] and the central executive. Each key area has a separate
646 function[s] that allows for new information to be “judged” against the existing

647 information. The information that is then held temporarily in a sensory store
648 to where it is then sent to the long term store to be “directed” by the central
649 executive which is a metacognitive process that controls and directs where atten-
650 tion should be placed on the incoming information. There is then a controlled
651 more conscious action or an automatic action based on the type of incoming in-
652 formation. Information that is automatic usually is considered habituated to the
653 memory system and is therefore not a novel stimulus. More focus is given to
654 information/stimuli that is more novel. In the integrated working memory model
655 information that is incoming in the brain is often “filtered” through a lens that
656 is understandable to the individual, novel stimuli. From here the information is
657 then encoded and stored in long-term memory for reactivation by new stimuli.

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

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

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

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

689 The prior knowledge that individuals have can have a negative effect on
690 their ability to gain and hold new information. Those with lower prior knowledge
691 of a given technology often have difficulty in reconstructing the information of a
692 new product compared to those that have less prior knowledge [Wood & Lynch,
693 2002]. When people are presented with new information, a new technology, en-
694 coding of the new information takes place. As that occurs, prior information of
695 the technology is retrieved, and an inference is made on subsequent information
696 by comparing the new and old information. This affects the ability to encode the
697 new information “correctly” and can disrupt later retrieval of the former. Similar
698 effects are seen when investigating motivational forces. Individuals with prior
699 knowledge may also have an overconfidence of the information that they already
700 have and are not as motivated to attend to the information they are learning.

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

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

717 An artifact of how issues such as HIV, Human Immunodeficiency Virus,
718 discussed in the media and the community that it affects creates a cognitive
719 problem with individuals judging the likelihood of catching the virus, especially
720 women. In the media it is often discussed how men who have sex with men
721 are the main individuals catching and spreading HIV. While HIV still affects the
722 LGBTQ+ community, the discussion around susceptibility affects other individu-
723 als outside of the LGBTQ+ community negatively as well. Women, for example,
724 have a genetically higher susceptibility to the virus [citation]. That being so,
725 often due to unintended ignorance to their chances are one of the leading groups
726 contracting new cases of HIV [citation]. Downlow culture as well increases the
727 chances of contracting the virus. Amongst some men that do not wish to ac-
728 knowledge their own homosexuality will choose to forgo the condom, implies a
729 premeditation, and do not necessarily believe they will contract the virus [cita-
730 tion]. Both examples are contributed by the representation of HIV in the media

731 and the current zeitgeist.

732 Common in all decisions is the difficulty and uncomfortability between
733 different decisions and opposing situations, is cognitive dissonance (Festinger,
734 1957). An interesting cognitive dissonant series of thoughts that some males
735 have is when choosing to wear a condom. Often, there will be the cognition of not
736 wanting to contract an STI, but also believing that condoms are uncomfortable
737 (MacPhail & Campbell, 2001). In addition to believing they are uncomfortable
738 there is an interesting cultural belief amongst some young men that wearing a
739 condom makes them less of a man (Pleck et al., 1993; Vincent et al., 2016). To
740 some the main decisional factor in whether to wear a condom is not contracting an
741 STI or getting pregnant [citation]. While, as noted with perceptions on condoms,
742 often comfort and how others will see them is the main factor. Sexually active
743 or those thinking to become sexually active often get their opinions on sexual
744 activity and safety practices from their peers. Often, the opinions of peers are
745 more influential than those of the parent[s]. Interestingly, some men believe that
746 due to the cultural cognition around contraception, discussions and decisions of
747 contraception is a female decision (Castro-Vázquez, 2000).

748 **1.5.1 Aggression and Cognition**

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

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

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

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

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

789 Often aggression and discrimination can be understood through the
790 schematic model. Media and social representations of individuals, especially men
791 of color, have often made assumptions and portrayed them as violent and crim-
792 inals. Currently a majority of US adults in a recent Pew Research Center poll
793 report that race relations are currently worse, Black Americans and people of
794 color in general report more cases of discrimination, and a majority say Black
795 Americans in particular are treated unfairly by the police (Pew Research Center,
796 2019). Aggression or discrimination is often the result of associating one group
797 with negative connotations. For example, in the case of those that believe Black
798 Americans are criminals they have through cognitive associations have related
799 the schematic concept of criminal with the features/schema of what they believe
800 is a Black American. The discrimination and aggression then occur through the
801 GAM processes with negative actions being the outcome.

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

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

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

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

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

854 **2.1 Dominance, Prestige, and Leadership orientation**

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

861 **2.1.1 Dominance**

862 The dominance motive is one of the more researched methods and well-
863 depicted power motives. Individuals with a dominant orientation display the more
864 primal of human behavior. These individuals will seek power through direct meth-
865 ods such as asserting dominance, control over resources, or physically assaulting
866 someone (M. W. Johnson & Bruner, 2012; Winter, 1993). Early research in dom-
867 inance motives has shown that acts of dominance ranging from asserting physical
868 dominance over another to physical displays of violence has been shown in many
869 mammalian species, including humans (Petersen et al., 2018; Rosenthal et al.,
870 2012).

871 Individuals high in dominance are often high in Machiavellianism, nar-
872 cissism, and often are prone to risky behavior (discussion further in the next
873 section). Continued research has hinted at a possible tendency for males to dis-
874 play these dominant seeking traits more than females (Bareket & Shnabel, 2020;
875 Sidanius et al., 2000). When high dominance individuals assert themselves they
876 are doing so to increase their sense of power (C. Anderson et al., 2012; Bierstedt,
877 1950). Asserting one's sense of dominance over another can be a dangerous task.
878 In the animal kingdom, it can often lead to injury. While, in humans asserting
879 dominance can take a multitude of actions such as leering behaviors, physical dis-
880 tance, or other non-verbal methods to display dominance (Petersen et al., 2018;
881 Witkower et al., 2020). Power from a dominant perspective is not always be-
882 stowed upon someone. Often, high dominance individuals will take control and
883 hold onto it.

884 **2.1.2 Prestige**

885 Contrary to the dominant motivation of using intimidation and aggression
886 to gain more power, a prestige motivation or prestige, in general, is bestowed
887 upon an individual from others in the community (Maner & Case, 2016;

888 Suessenbach et al., 2019). Different from the dominance motivation, a prestige
889 motivation is generally unique to the human species (Maner & Case, 2016).
890 Due in part to ancestral human groups being smaller hunter-gatherer societies,
891 individuals that displayed and used important behaviors beneficial to the larger
892 group were often valued and admired by the group. Therein, the social group
893 bestows the authority onto the individual. Generally, this type of behavior
894 can be passively achieved by the prestigious individual. However, this does
895 not remove the intent of the actor in that they too can see prestige from the
896 group, but the method of achieving that social status greatly differs from that of
897 dominance-seeking individuals.

898

899 Apart from dominance-motivated individuals that continually have to fight
900 for their right to have power over others, individuals that seek or were given power
901 through a prestige motivation are not generally challenged in the same sense as
902 dominant individuals. Displaying behaviors that the community would see as
903 beneficial would endear them into the community making the survival of the
904 community as a whole better (Maner & Case, 2016). Evolutionarily this would
905 increase the viability of the prestigious individual and their genes. Similar to
906 the dominance perspective, the prestige perspective overall increases the power
907 and future survivability of the individual. However, due to the natural difference
908 between prestige and dominance, dominance-seeking individuals are challenged
909 more often resulting in more danger to their position (M. W. Johnson & Bruner,
910 2012).

911 **2.1.3 Leadership**

912 With a shared goal a leader is someone that takes initiative and attracts
913 followers for that shared goal (Van Vugt, 2006). Leadership is an interesting
914 aspect of behavior in that it is almost exclusive to human interaction. Dis-

915 cussions by evolutionary psychologists point to the formation of early human
916 hunter-gatherer groups where the close interconnectedness created a breeding
917 ground for leadership roles. As early humans began to evolve it would become
918 advantageous for individuals to work together for a common goal (King et
919 al., 2009). Often, individuals with more knowledge of a given problem would
920 demonstrate leadership and take charge or be given power. Multiple explanations
921 of the evolution of leadership exist such as coordination strategies, safety, along
922 with evidence for growth in social intelligence in humans (King et al., 2009; Van
923 Vugt, 2006).

924

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

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

943 risk their health and safety.

944

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

954 **2.2 The present study**

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

963 **# Experiment 1 ## Methods**

964 Participants were a convenience sample of 111 individuals from Prolific
965 Academic’s crowdsourcing platform (www.prolific.io). Prolific Academic is an
966 online crowdsourcing service that provides participants access to studies hosted
967 on third-party websites. Participants were required to be 18 years of age or
968 older and be able to read and understand English. Participants received £4.00,
969 which is above the current minimum wage pro-rata in the United Kingdom, as

970 compensation for completing the survey. The Psychology Research Ethics Com-
971 mittee at the University of Edinburgh approved all study procedures [ref: 212-
972 2021/1]. The present study was pre-registered along with a copy of anonymized
973 data along with a copy of the R code and supplemental materials are available
974 at (<https://osf.io/s4j7y>).

975 **2.3 Materials**

976 **2.3.1 Demographic Questionnaire**

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

981 **2.3.2 Dominance, Prestige, and Leadership Orientation**

982 The 18-item Dominance, Prestige, and Leadership scale, DoPL (Suessen-
983 bach et al., 2019), is used to measure dominance, prestige, and leadership orien-
984 tation. Each question corresponds to one of the three domains. Each domain is
985 scored across six unique items related to those domains (e.g., “I relish opportuni-
986 ties in which I can lead others” for leadership) rated on a scale from 0 (Strongly
987 disagree) to 5 (Strongly agree). Included in this scale are 15 masking questions
988 obtained from the unified motives scale [20] consistency reliability for the current
989 sample is $\alpha = 0.86$.

990 **2.3.3 Domain Specific Risk-taking Scale**

991 The 40-item Domain-Specific Risk-taking Scale, DOSPERT (Weber et al.,
992 2002) is a scale assessing individuals’ likelihood of engaging in risky behaviors
993 within 5 domain-specific risky situations: financial (“Gambling a week’s income
994 at a casino.”), social (“Admitting that your tastes are different from those of your
995 friends”), recreational (“Trying out bungee jumping at least once”), health and

996 safety (“Engaging in unprotected sex”), and ethical (“Cheating on an exam”)
997 situations. Each risky situation is then rated on a five-point Likert scale (1 being
998 very unlikely and 5 being very likely). Two additional five-point Likert scales
999 assess risk perception and expected benefits (1 being not at all risky and 5 being
1000 extremely risky; 1 being no benefits at all and 5 being great benefits) respectively.
1001 Example risky situations are “Admitting that your tastes are different from those
1002 of a friend” and “Drinking heavily at a social function.” Internal consistency
1003 reliability for the current samples for the 3 sub-domains are $\alpha = 0.85$, $\alpha = 0.90$,
1004 $\alpha = 0.92$ respectively.

1005 2.4 Procedure

1006 Participants were recruited via a study landing page on Prolific’s web-
1007 site or via a direct e-mail to eligible participants (Prolific Academic, 2018). The
1008 study landing page included a brief description of the study including any risks
1009 and benefits along with expected compensation for successful completion. Par-
1010 ticipants accepted participation in the experiment and were directed to the main
1011 survey (Qualtrics, Inc; Provo, UT) where they were shown a brief message on
1012 study consent.

1013 Once participants consented to participate in the experiment they an-
1014 swered a series of demographic questions. Once completed, participants com-
1015 pleted the Dominance, Prestige, and Leadership Scale and the Domain Specific
1016 Risk-taking scale. The two scales were counterbalanced to account for order ef-
1017 fects. After completion of the main survey, participants were shown a debriefing
1018 statement that briefly mentions the purpose of the experiment along with the
1019 contact information of the main researcher (AI). Participants were compensated
1020 £4.00 via Prolific Academic.

1021 2.5 Data analysis

1022 Demographic characteristics were analyzed using multiple regression for
1023 continuous variables (age) and Chi-square tests for categorical variables (gender,
1024 race, ethnicity, ethnic origin, and education). Means and standard deviations
1025 were calculated for the relevant scales (i.e., DoPL and DOSPERT). All analyses
1026 were done using (R Core Team, 2021) along with (Bürkner, 2017) package.

1027 The use of bayesian statistics has a multitude of benefits to statistical
1028 analysis and research design. One important benefit is through the use of prior
1029 data in future analyses. Termed as priors, is the use of prior distributions for
1030 future analysis. This allows for the separation of how the data might have been
1031 collected or what the intention was. In essence, the data is the data without the
1032 interpretation of the scientist.

1033 All relevant analyses were conducted in a Bayesian framework using the
1034 brms package (Bürkner, 2018) along with the cmdstanr packages notes (Gabry &
1035 Cesnovar, 2021). In addition to the aforementioned packages, we used bayestestR,
1036 rstan, and papaja (Aust & Barth, 2020; Makowski et al., 2019; Stan Development
1037 Team, 2020).

1038 2.6 Results

1039 One hundred and eleven individuals completed the main survey. Of these
1040 individuals, 111 completed all sections without incomplete data and were there-
1041 fore retained in most data analyses. In later analyses to account for outliers two
1042 participants had to be excluded from the dataset. Table 1 shows the demographic
1043 information for the participants. The average completion time for participants
1044 was 20M 58s ($SD = 10M\ 43s$).

Table 1*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%)

1045 **2.6.1 Preregistered Analyses**

1046 We first investigated DoPL orientation on general risk preference (Figure
1047 1). General risk preference was anecdotally explained by dominance orientation,
1048 participant gender, and participant age (see table 2).

1049 **2.6.2 Demographic and DoPL**

1050 All participants completed the dominance, leadership, and prestige
1051 scale (Suessenbach et al., 2019). Empirically, men have generally been more
1052 dominance-oriented in their behavior (Rosenthal et al., 2012). Following the lit-
1053 erature, men tended to be more dominance orientated than women. The marginal

Table 2

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

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).

2.9 Discussion

3 Experiment 2

3.1 Methods

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

1073 Questionnaire. However, we added the Brief-Pathological Narcissism Inventory to
1074 assess possible interactions of dominance and narcissism in risky decision-making.
1075 Materials and methods were approved by the University of ## Participants

1076 Following experiment 1, participants were a convenience sample of 111
1077 individuals from Prolific Academic’s crowdsourcing platform (www.prolific.io).
1078 Prolific Academic is an online crowdsourcing service that provides participants
1079 access to studies hosted on third-party websites. Participants were required to be
1080 18 years of age or older and be able to read and understand English. Participants
1081 received £4.00, which is above the current minimum wage pro-rata in the United
1082 Kingdom, as compensation for completing the survey. The Psychology Research
1083 Ethics Committee at the University of Edinburgh approved all study procedures
1084 [ref: 212-2021/2]. The present study was pre-registered along with a copy of
1085 anonymized data and a copy of the R code is available at ([https://osf.io/](https://osf.io/s4j7y)
1086 [s4j7y](https://osf.io/s4j7y)).

1087 **3.2 Materials**

1088 **3.2.1 Brief-Pathological Narcissism Inventory**

1089 The 28 item Brief Pathological Narcissism Inventory (B-PNI; Schoenleber
1090 et al., 2015) is a modified scale of the original 52-item Pathological Narcissism
1091 Inventory (PNI; Pincus et al., 2009). Like the PNI the B-PNI is a scale measuring
1092 individuals’ pathological narcissism. Items in the B-PNI retained all 7 patholog-
1093 ical narcissism facets from the original PNI (e.g., exploitativeness, self-sacrificing
1094 self-enhancement, grandiose fantasy, contingent self-esteem, hiding the self, de-
1095 valuing, and entitlement rage). Each item is rated on a 5 point Likert scale
1096 ranging from 1 (not at all like me) to 5 (very much like me). Example items
1097 include “I find it easy to manipulate people” and “I can read people like a book.”

1098 **3.3 Procedure**

1099 Participants were recruited via a study landing page on Prolific’s website
1100 or via a direct e-mail to eligible participants (Prolific Academic, 2018). The study
1101 landing page included a brief description of the study including any risks and ben-
1102 efits along with expected compensation for successful completion. Participants
1103 accepted participation in the experiment and were directed to the main survey
1104 on pavlovia.org (an online JavaScript hosting website similar to Qualtrics) where
1105 they were shown a brief message on study consent.

1106 Once participants consented to participate in the experiment they an-
1107 swered a series of demographic questions. Once completed, participants com-
1108 pleted the Dominance, Prestige, and Leadership Scale and the Domain Specific
1109 Risk-taking scale. An additional survey was added (the novel aspect of experi-
1110 ment 2) where participants, in addition to the two previous surveys, were asked to
1111 complete the brief-pathological narcissism inventory. The three scales were coun-
1112 terbalanced to account for order effects. After completion of the main survey,
1113 participants were shown a debriefing statement that briefly mentions the purpose
1114 of the experiment along with the contact information of the main researcher (AI).
1115 Participants were compensated £4.00 via Prolific Academic.

1116 **3.4 Data analysis**

1117 Demographic characteristics were analyzed using multiple regression for
1118 continuous variables (age) and Chi-square tests for categorical variables (gender,
1119 race, ethnicity, ethnic origin, and education). Means and standard deviations
1120 were calculated for the relevant scales (i.e., DoPL and DOSPERT). All analyses
1121 were done using (R Core Team, 2021) along with (Bürkner, 2017) package.

1122 The use of bayesian statistics has a multitude of benefits to statistical
1123 analysis and research design. One important benefit is through the use of prior
1124 data in future analyses. Termed as priors, is the use of prior distributions for

1125 future analysis. This allows for the separation of how the data might have been
1126 collected or what the intention was. In essence, the data is the data without the
1127 interpretation of the scientist.

1128 All relevant analyses were conducted in a Bayesian framework using the
1129 brms package (Bürkner, 2018) along with the cmdstanr packages notes (Gabry &
1130 Cesnovar, 2021). In addition to the aforementioned packages, we used bayestestR,
1131 rstan, and papaja for analysis along with the creation of this manuscript (Aust
1132 & Barth, 2020; Makowski et al., 2019; Stan Development Team, 2020).

1133 **3.5 Results**

1134 **3.6 Preregistered Analyses**

1135 **3.6.1 Demographic and DoPL**

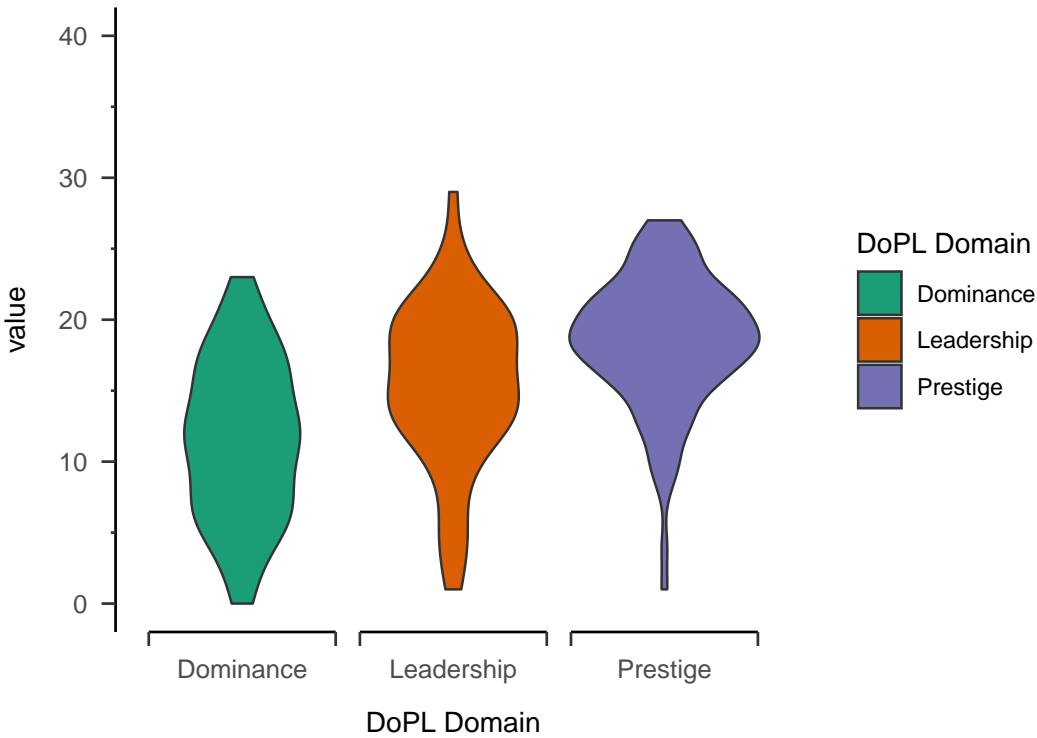
1136 **3.7 Domain-Specific Risk-Taking**

1137 **3.8 Interactions**

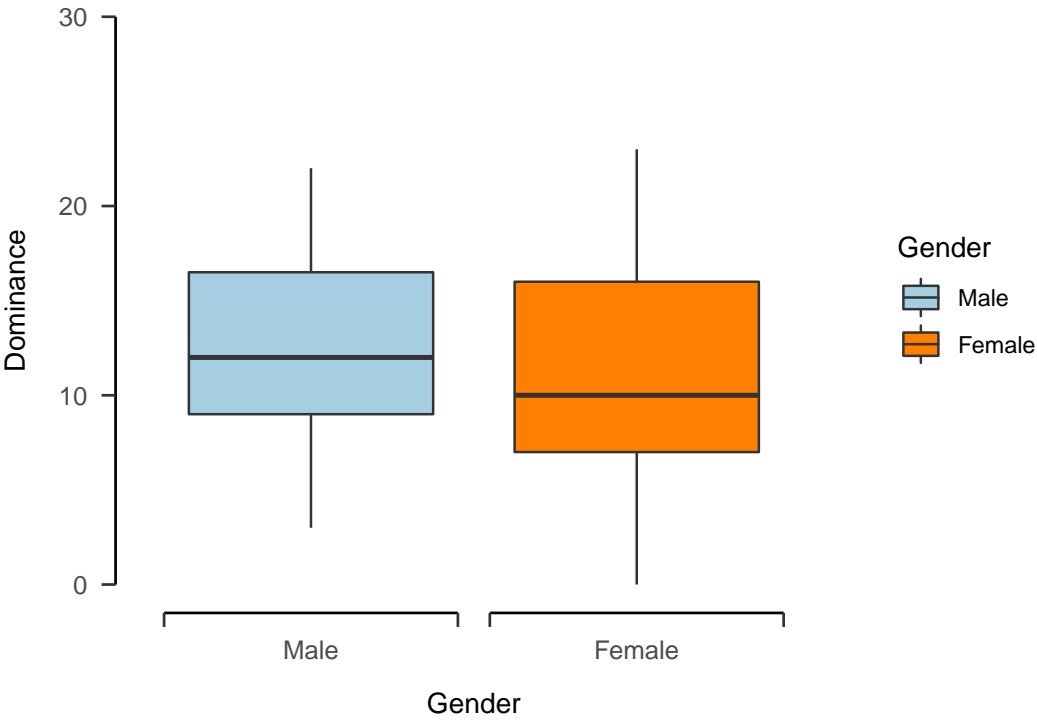
1138 **3.9 Discussion**

1139 **3.10 Limitations**

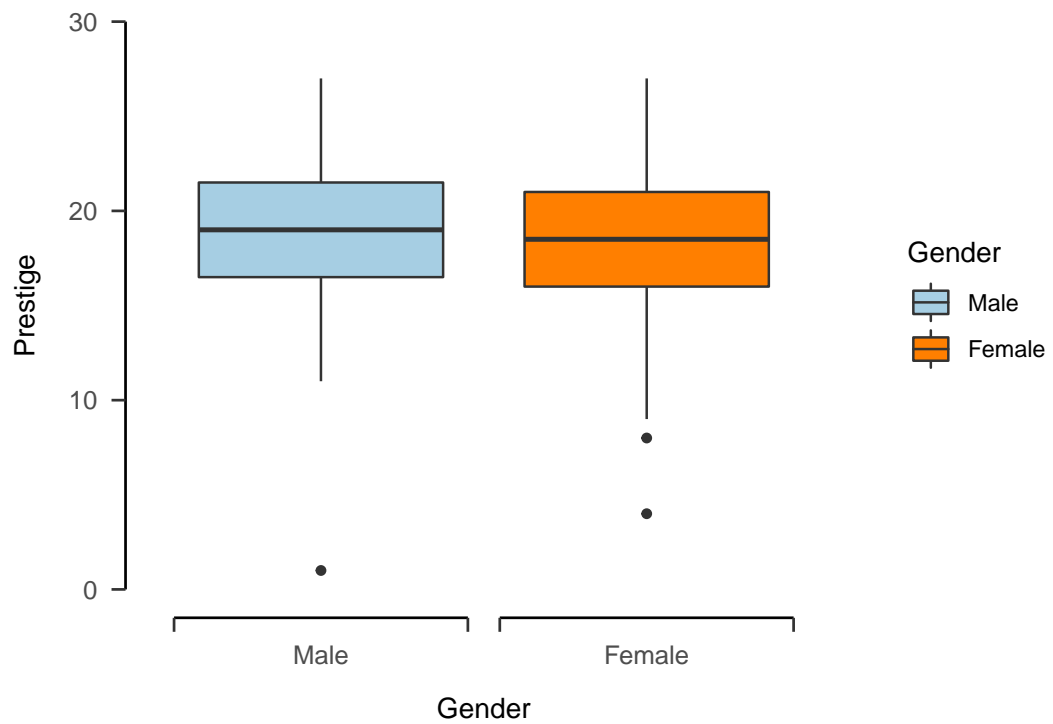
1140 **3.11 Future Implications**



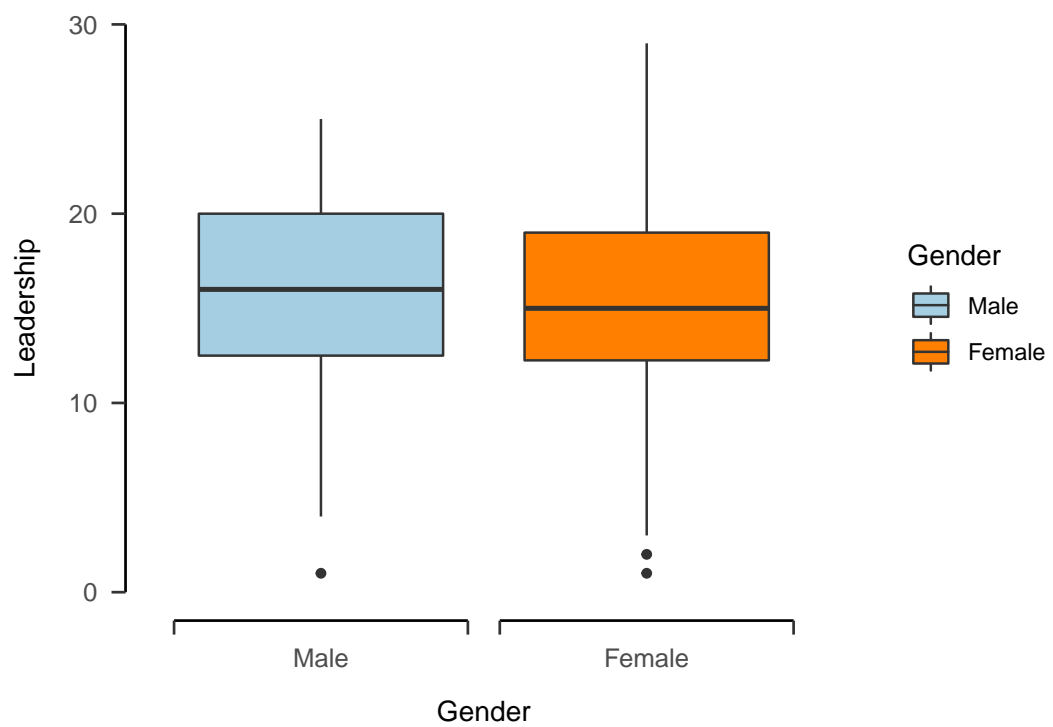
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1143



1144



1145

Table 3

	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 4

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

5 Chapter 3:

5.1 Experiment 1:

5.2 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-

1156 ing the five-factor model concept where the primary traits are extraversion and
1157 agreeableness (Hyatt et al., 2018).

1158 **5.3 Narcissism**

1159 Narcissism is a personality trait that originally was seen as a method or
1160 mechanism to shield the individual from feelings of low self-worth (Yakeley, 2018).
1161 The understanding of what narcissism soon shifted with a focus on empirical un-
1162 derstandings of the individual. Researchers such as Jeffrey Young, who expanded
1163 on the work of Aaron Beck, theorized that the core beliefs of an individual along
1164 with negative self-schemas influence the individual to seek out or act in ways in
1165 line with a narcissitic personality (J. E. Young et al., 2006). Conceptualizations
1166 of narcissism would soon entail it to be an understanding of grandiose sense of
1167 self, fantastical beliefs of success and general superiority, along with a general
1168 lack of empathy (American Psychiatric Association, 2013; Okada, 2010; Yakeley,
1169 2018)./ The earliest understandings of narcissism were through Sigmund Freud.
1170 However, the term was first coined by Havelock Ellis who used the eponymous
1171 Narcissus myth in the explanation of narcissism. Freud would then publish the
1172 text *On Narcissism* to further our understanding of narcissism. Future under-
1173 standings of narcissism would develop from a social cognitive framework of the
1174 individual in relation to their environment. Such as Kernberg's assessment that
1175 narcissism stems from an aggressive and conflict filled childhood affecting the
1176 child's development and later aggression and envy towards others (Russell, 1985).

1177 **5.4 The present Experiments**

1178 Pathological narcissism at its core looks strikingly similar to self-esteem
1179 and in-turn a grandiose sense of self. Investigations at risky situations have looked
1180 at sexual self-esteem, exploratory experiment one. The present experiment seeks
1181 to expand to investigate the relationship between pathological narcissism and see
1182 which is a stronger predictor of risky sexual situations and riskiness in general.

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