

## **Aggression by Omission: Redefining and Measuring an Understudied Construct**

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### **Abstract**

Researchers of aggression have classically focused on what has been previously called active aggression—the deliberate infliction of harm through direct application of deleterious consequences. However, the counterpart to this, what was originally called passive aggression, has gone understudied, and its definition has mutated beyond its original conceptualization. The present two studies (*N*'s 196 and 220, respectively) attempted to examine passive aggression as originally defined—the deliberate withholding of behavior in order to ensure that a target is harmed—and renaming it aggression by omission (ABO), in contrast to aggression by commission (ABC). These studies found that both fit within a similar nomological network of antagonism, Sadism, and trait aggression. Study 2 additionally found that both were equally affected by provocation and were considered equally harmful. These findings encourage further research into ABO to capture this construct concretely, especially in the context of common paradigms (e.g., the TAP, Hot Sauce, PSAP), and trait aggression scales, which typically measure ABC.

Keywords: aggression, passive aggression, antagonism, integrative data analysis

## **Aggression by Omission: Defining and Measuring an Understudied Construct**

*"I won't kill you, but I don't have to save you." – Batman, Batman Begins*

Aggression is an anti-social phenomenon that is nonetheless perpetrated from time to time by normally prosocial individuals. Everyday aggression does not always manifest in outright physical harm but can also be perpetrated in more subtle ways, such as relational aggression (e.g., social exclusion) or resources deprivation (e.g., theft). Much research has been done on the antecedents of aggression—both at the individual (e.g., trait aggression) and situational factors (e.g., provocation). Baron and Richardson (1994) defined aggression as any attempt to harm (or incur other negative consequences to) another person that the aggressor believes does not wish to be harmed in the intended form or to the intended degree. Under this definition, acts that cause unpleasant effects unknown to the perpetrator (e.g., harmful accidents) would not count as aggression, nor would acts that cause negative effects that the target would not wish to avoid (e.g., harmful but necessary medical procedures or consensual BDSM). This definition has been advanced and expanded by several other researchers (Anderson & Bushman, 2002; Parrott & Giancola, 2007) to highlight the role of intentionality in aggression.

Parrott and Giancola (2007) outlined a taxonomy of aggression including dimensions of over-covert (i.e., the degree to which the identity of the aggressor is known), direct-indirect (i.e., the degree to which the harm is caused primarily by the actor or through an intermediary), and active-passive (i.e., the degree to which the harm

is caused by an act or by the withholding of action). This last dimension is of particular interest, as while many researchers have acknowledged the existence of “passive aggression,” the vast majority of research has focused solely on active forms of aggression.

The aim of the present paper is to provide clarity to the construct of passive aggression by renaming it “Aggression by Omission,” and comparing it to the more commonly studied active aggression (herein called “Aggression by Commission”), at both the behavioral and trait level, using a symmetrical paradigm wherein the method and degree of harm is kept identical between conditions. Specifically, we wanted to examine if the degree of aggression would differ by whether the harm was delivered via omission or commission. In addition, we aimed to highlight the similarities and potential differences between these constructs by examining their respective associations with well-established trait correlates of aggression.

### **Passive aggression**

Although sometimes mentioned in models of aggression—even as far back as 1961 (Buss, 1961)—passive aggression is infrequently studied within social psychology and has generally been poorly defined. Although Buss (1961) conceptualized passive aggression as the deliberate withholding of behavior in order to inflict (or ensure) harm upon a target, this has been somewhat muddied by later research. Richardson and Hammock (2011) defined passive aggression as “behavior that is intended to harm another living being by not doing something” (p. 54). However, these authors note that passive aggression is commonly coupled with indirect aggression (i.e., harm delivered to a target by a third party or other mechanism rather than the aggressor themselves)

and covert aggression (i.e., wherein the aggressor is unknown to or cannot be identified by the target) that may be used when the perpetrator wishes to avoid detection or retaliation. However, passive aggression is not always covert, as there may be cases wherein the target is fully aware that the perpetrator is allowing them to be harmed. Similarly, passive aggression is not always indirect, as there may be cases wherein the withholding of behavior by the perpetrator may be the exact mechanism of harm (i.e., letting an individual fall from a great height without catching them). Indeed, Parrott and Giancola (2007) separated these modalities by introducing a 2 x 2 classification system wherein acts of aggression are categorized as Active vs. Passive x Direct vs. Indirect. This proposed matrix may help to distinguish the specific role of passive aggression, although it has not been applied to much of the passive aggression literature.

Passive aggression has gained some attention from clinical and counseling psychologists, even including a “passive aggressive personality disorder” in the third and fourth editions of the Diagnostic and Statistical Manual of Mental Disorders (American Psychiatric Association, 1980; 1994). Characteristics of this personality disorder included procrastination, chronic obstructive behavior, ambivalence, and a fragile ego. However, much of this does not align with most taxonomies of passive aggression, including Buss’ (1961) original, and was eventually removed as a personality disorder in the most recent edition (American Psychiatric Association, 2013).

Although the nomological network of passive aggression is understudied, it does seem to nest within a common network with active aggression. Passive aggression (as measured by a modified form of the Richardson Conflict Response Questionnaire; Richardson & Green, 2003) is positively correlated with anger-in as measured by the

State-Trait Anger Expression Inventory (STAXI; Spielberger, 1999), suggesting that individuals who engage in passive aggression experience anger but may have difficulties expressing it outwardly. In addition, Thompson and colleagues (2016) examined the prevalence of passive aggressive revenge within a workplace setting, using a withdrawal of prosocial “workplace citizenship behaviors” (e.g., “I help others when their work load increases even though it may not be formally required by the job”) as a measure of passive aggressive retaliation. Workplace citizenship behaviors were also positively correlated with the personality trait Honest-Humility. Taken otherwise, this suggests that a withdrawal of workplace helping behavior is correlated with antagonistic traits.

Trait measures of passive aggression have been similarly marred by inconsistencies and misperceptions of the construct. For instance, the “passive aggression” subscale in the modified Richardson Conflict Response Questionnaire (Richardson & Green, 2003) includes items almost exclusively measuring relational aggression (e.g., “seemed uninterested in things that were important to the person”). Similarly, the “passive” subscale from the Forms of Aggression scale (Verona et al., 2008) includes items that are more obstinance or ignoring than ensuring harm (e.g., “I refuse to listen to them”). These scales measure a small range of passive aggressive behaviors, and conflate passive aggression with relational aggression. It is thus necessary to more concretely define and measure this construct.

### **Redefining passive aggression: aggression by omission**

Previous passive aggression research has made several assumptions that need clarification. Firstly, many (including Buss, 1961) assume that passive aggression is

always covert (i.e., wherein the perpetrator is unknown to the victim or cannot be identified) but this is not necessarily true. There may certainly be cases wherein the target of aggression by omission is fully aware that the perpetrator has deliberately withheld behavior to allow harm to them. Secondly, studies that have discussed passive aggression (e.g., Berkowitz et al., 1989) have often assumed that it is less severe (or less harmful) compared to active aggression, but this is also not always the case. Thirdly, it is important to clarify that passive aggression is not mere inaction or a refusal to help. Aggression is most clearly defined by its motivation to harm, rather than the act itself. Passive aggression is the deliberate withholding of a beneficial or harm-mitigating behavior with the *specific intent to ensure harm upon another*. Fourthly, it is important to further note that passive aggression is not in and of itself a form of aggression, like physical aggression, but rather a modality describing a mechanism by which harm is caused. Just as aggression can be categorized as impulsive/controlled, appetitive/aversive, it can be categorized as active/passive. Although commonly considered a form of relational aggression (e.g., Elad-Strenger et al., 2022), passive aggression extends beyond this, and can manifest in many forms. Just as there can be physical active aggression, such as hitting or shoving an individual, there can also be physical passive aggression, such as not alerting a target that they are about to step on a sharp object in order to ensure that they get injured.

Passive aggression is inconsistently and often inaccurately defined (e.g., “a pattern of indirectly expressing negative feelings instead of openly addressing them; Hall-Flavin, 2012; “a way of expressing negative feelings, such as anger or annoyance, indirectly instead of directly,” Psychology Today, n.d.). These multiple definitions render



passive aggression an imprecise construct that can even include acts of aggression by commission (e.g., eyerolling, backhanded compliments). For these reasons, we avoid the use of the term passive aggression and prefer one that more accurately captures the defining feature of our focal behavioral phenotype—aggression by omission, which is characterized by the deliberate withholding of harm-preventing or harm-mitigating behavior by an actor in order to allow or ensure harm (or other deleterious consequences) to come to an unwilling target. This is contrasted with active aggression, herein called *aggression by commission (ABC)*, which is marked by the active perpetration of acts that cause harm.

### **The present studies**

The present studies were designed to offer greater clarity to the research on ABO by establishing clearer construct definitions, presenting a paradigm to measure ABO and ABC simultaneously, and examining ABO within the greater nomological network of aggression. In two studies, ABO and ABC were measured using a symmetrical paradigm wherein both modalities of aggression were administered using the same objective level of harm and the same form of aggression (i.e., physical aggression in both). Participants were able to send (or in the case of ABO, refuse to stop) an aversive stimulus (e.g., a picture depicting gore or rotting meat) to an ostensible partner.

### **Study 1**

#### **Method**

The preregistered research plan for this study can be found at <https://osf.io/anzjy>; data and materials can be found at <https://osf.io/h9ejg/>. We expected that aggression by

omission would be significantly different from a "mere inaction" condition (i.e., allowing the delivery of a non-harm stimulus). In order to establish convergent validity, we hypothesized that aggression by omission would positively correlate with trait aggression and negatively with trait agreeableness. However, due to the novelty of the study, the other correlational analyses were considered exploratory in nature.

### **Participants**

Although our preregistration specified that we would collect a total of 400 participants, due to time constraints and the end of the academic semester, the research team elected to end data collection prematurely. The initial sample consisted of 221 undergraduates from a public university in the southern United States, who received course credit for participation. According to our preregistered exclusion criteria, 16 participants were removed for failing to complete both of the phases of the omission/commission aggression paradigm and a further nine were removed due to failing the survey attention checks. This left a final sample of 196 participants (mean age = 19.86, SD = 2.14, range = 18–34). The majority (80%) of participants identified as women, then men (17%), and another gender identity (3%). Participants commonly identified as White (39%), followed by Asian (20%), Black or African American (19%), Hispanic (12%), and another racial identity (10%).

### **Omission/Commission Aggression Paradigm**

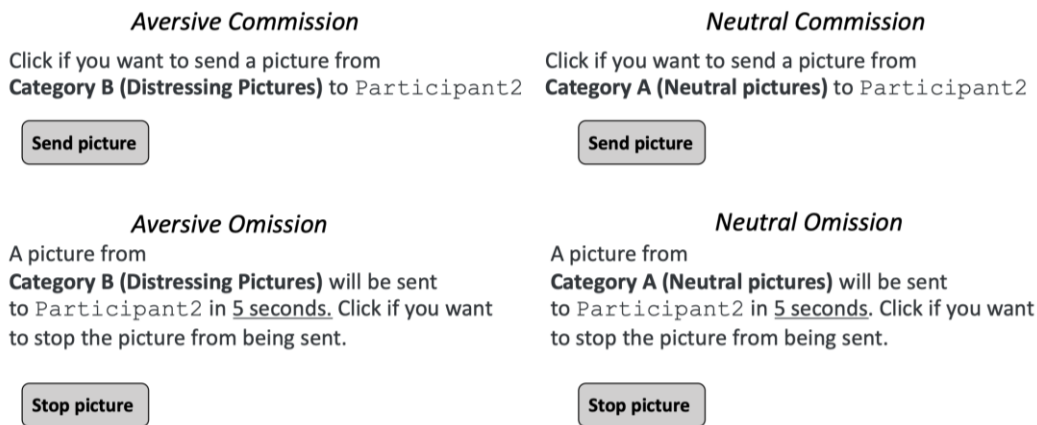
Provocation was elicited using an essay feedback paradigm, which is commonly used in aggression studies in order to induce participants to retaliate (e.g., Barlett & Anderson, 2011). In the paradigm, participants received negative feedback on an essay that they write (full details regarding the specific feedback that participants received can

be found in Supplemental Materials S1). After receiving the negative feedback on their essay by the ostensible other participant, participants were told that both they and their partner would participate in a second study on picture qualities and memory, in reality a continuation of the first. Participants were then told that they would be randomly assigned to either select pictures for their partner to view or to view pictures their partner sent, in order to reduce researcher bias (in reality, all participants were assigned to select pictures). Participants were told that there would be 40 trials wherein their partner would have to memorize a picture, which the participant would be able to choose, for recognition later while they were doing a filler task. Participants were told that the pictures would come from two categories: aversive (e.g., rotting meat) or neutral (e.g., pictures of buildings).

The paradigm was a 2 (picture type: aversive vs. neutral) x 2 (modality: commission vs. omission) within-subjects design (Figure 1). In the ten aversive-commission trials, participants were given the opportunity to send an aversive picture to their partner to view. If they did not click the onscreen button to send a picture within five seconds, no picture was sent. In the aversive-omission trials, participants were told that their partner would automatically be sent a picture from the aversive category in five seconds, but that they could intervene to prevent that picture from being sent. These two blocks map onto our operational definitions of aggression by commission (ABC) and aggression by omission (ABO), respectively. In order to further test the validity of these constructs and to help rule out the possibility that ABO is due to mere inaction, and not specific aggressive intent, there was a neutral-omission condition, wherein a neutral picture would be automatically sent to their partner if participants did not intervene. Also

included was a neutral-commission block, wherein participants were able to send a neutral picture to their partner. The operational definition in each condition was the number of pictures sent (either aversive or neutral). Scores could range from 0 to 10. The order of the blocks was randomized.

*Figure 1. Picture selection prompts by condition*



### **Trait Measures**

In addition to examining ABO and ABC at a behavioral level, we investigated the nomological network of ABO and ABC. Specifically, we included a measure of the Big Five model of personality traits, one of the most commonly used and robust models of personality. In particular, Big Five antagonism has been shown to be the overarching construct that captures trait aggression (Chester & West, 2020; West & Chester, 2021). We also examined a measure of the behavioral activation system/behavioral inhibition system. Finally, we included several malevolent personality traits that we believed to be relevant to ABO and ABC, and which are commonly studied in the field of aggression: trait aggression, Sadism—which has been previously established as one of the

strongest trait-level predictors of aggression (e.g., Chester et al., 2019), and reactive and proactive aggression.

**Big Five Inventory-44 (BFI-44; John & Srivastava, 1999).** The BFI-44 is a scale designed to measure individual differences in the Big Five model of personality traits. It is comprised of five subscales: Extraversion (8 items; e.g., “Is outgoing, sociable”), Agreeableness (9 items; e.g., “Is helpful and unselfish with others), Conscientiousness 9 items; e.g., “Is a reliable worker”), Neuroticism (8 items; e.g., “Worries a lot”), Openness to experience (10 items; e.g., “Is original, comes up with new ideas”). Participants were asked to rate the degree to which they agree or disagree that they “see myself as a person who...” on a scale from 1 (*Disagree strongly*) to 5 (*Agree strongly*). The mean for each subscale was used.

**Buss-Perry Aggression Questionnaire (BPAQ; Buss & Perry, 1992).** The BPAQ is a well validated and widely used trait aggression scale designed to measure not only a general tendency for aggressive acts, but also for aggression-related emotions and cognitions. It is comprised of four subscales: Physical aggression (9 items; e.g., “Once in a while I can't control the urge to strike another person”), Verbal aggression (5 items; e.g., “I tell my friends openly when I disagree with them”), Anger (7 items; e.g., “When frustrated, I let my irritation show”), and Hostility (7 items; e.g., “I am suspicious of overly friendly strangers”). Participants were asked to rate the degree to which they feel each statement is characteristic of them on a scale from 1 (*Extremely uncharacteristic of me*) to 7 (*Extremely characteristic of me*). The mean for each subscale was used.

**Reactive-Proactive Aggression Questionnaire (RPQ; Raine et al., 2006).** The RPQ is a commonly used trait scale created to measure individual predispositions for Reactive aggression (i.e., aggression in response to provocation, often impulsive and driven by aversive emotions; 12 items; e.g., “Gotten angry or mad or hit others when teased”) and Proactive aggression (i.e., aggression without provocation, often instrumental; 11 items; e.g., “Had fights with others to show who was on top”). Participants were asked to rate generally how often you have done each on a scale from 0 (*Never*) to 2 (*Often*). The mean score was used for each subscale.

**Comprehensive Assessment of Sadistic Tendencies (CAST; Buckles & Paulhus, 2014).** The CAST is a measure of trait “everyday” (i.e., subclinical) sadism, and is comprised of three subscales, two measuring direct sadism: Verbal (6 items; e.g., “I have purposely tricked someone and laughed when they looked foolish”) and Physical (5 items; e.g., “I enjoy physically hurting people,”) and one subscale measuring Vicarious sadism (7 items; e.g., “In video games, I like the realistic blood spurts”). Participants were asked to rate the degree to which they agree with each statement on a scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*). The mean for each subscale was used.

**Behavioral inhibition system/Behavioral activation system Scale (BIS/BAS; Carver & White, 1994).** The BIS/BAS scale was designed to measure individual sensitivities to two affective/behavioral motivation systems, the behavioral inhibition system (BIS; i.e., regulation of aversive motivations) and the behavioral activation systems (BAS; i.e., regulation of appetitive motivations). The BIS/BAS consists of four subscales: BAS drive (4 items; e.g., “If I see a chance to get something I want, I move

on it right away”), BAS fun-seeking (4 items; e.g., “I will often do things for no other reason than that they might be fun”), BAS reward responsiveness (5 items; e.g., “When I’m doing well at something, I love to keep at it”), and BIS (7 items; e.g., “I feel worried when I think I have done poorly at something important”). Participants were asked to rate the degree to which they agree or disagree with each statement on a scale from 1 (*Very true of me*) to 4 (*Very false of me*). The mean for each subscale was used.

### **Procedure**

All procedures were conducted online and remotely through a Qualtrics survey, due to the COVID-19 pandemic. After consenting, participants completed the BFI-44. They were then asked to write an essay about a situation that made them angry, ostensibly designed to assess their writing ability. Participants were told that they would be exchanging their essay with another participant who signed up for the same time slot, and who would evaluate their essay (in reality, the other participant’s essay and feedback were fake and created by the researchers). After completing their essay, participants read the essay from their partner and rated it on quality and clarity. Participants were then told that their partner rated their essay very poorly. Following this feedback, participants were told that they would be participating in a second study with the same partner. Participants then completed the picture selection task. After completing all 40 trials, participants were asked to complete the trait aggression measures (i.e., BPAQ, RPQ), the CAST, and the BIS/BAS scale, the order of which was randomized by Qualtrics. Following this, they were debriefed. We did not implement suspicion checks in Studies 1 and 2, given evidence of their lack of validity and the

likelihood that they systematically exclude participants with certain characteristics (e.g., skepticism; Blackhart et al., 2012; McMillen & Austin, 1971; Nichols & Maner, 2008).

### **Data analytic strategy**

Items were recoded such that the display of the target image (i.e., selecting to show the aversive image in the commission trials and not stopping the aversive image in the omission trials) was represented as 1 in each trial, the total number of trials were then summed to create an index of picture assignment. In accordance with our preregistration, missing data in the trait measures were replaced using multiple imputation predictive mean metric using the *Mice* package version 45i03 (van Buuren & Groothuis-Oudshoorn, 2011) in R version 4.0.5 (R Core Team, 2021). Scores for each discriminant validity measure were averaged to create indices. As a post-hoc decision, we decided to conduct a Bayesian repeated measures ANOVA in order to investigate null effects. Bayesian analyses estimate the probability of the null hypothesis being true given the data, whereas frequentist statistics only estimate the probability of the observed data given the null hypothesis. Using Bayesian analyses, we were able to estimate the probability of the null hypothesis being true for each ANOVA effect. We used the default Bayesian repeated measures ANOVA settings within JASP version 0.16.1, which used the maximal set of random effects model (e.g., van den Bergh et al., 2022) and, as recommended by Rouder and colleagues (2012), a default prior probability specification for a mixed ANOVA in JASP of 0.2. We used the Bayes factor to compare all models to the null model. All analyses were conducted using JASP version 0.16.1 (JASP Team, 2022).

## **Results**



**Descriptive statistics**

Descriptive statistics can be found in Table 1.

*Table 1. Descriptive statistics and reliability for measures in Study 1.*

Scale	Mean	Std. Deviation	Min	Max	Skew	Kurtosis	Alpha
Aversive-Commission (ABC)	4.71	3.71	0	10	0.08	-1.45	
Aversive-Omission (ABO)	4.60	3.77	0	10	0.13	-1.50	
Neutral-Commission	6.85	3.19	0	10	-0.95	-0.17	
Neutral-Omission (Mere inaction)	7.11	2.92	0	10	-1.00	0.13	
BAS Drive	2.17	0.55	1.00	4.00	-0.03	0.09	.74
BAS Fun-seeking	1.96	0.53	1.00	4.00	0.28	0.27	.70
BAS Reward	1.54	0.49	1.00	3.00	0.67	-0.57	.76
BFI Agreeableness	3.83	0.63	2.20	5	-0.29	-0.70	.75
BFI Conscientiousness	3.39	0.60	1.40	4.90	-0.22	0.58	.70
BFI Extraversion	3.09	0.77	1.10	4.90	0.06	-0.31	.83
BFI Neuroticism	3.33	0.65	1.80	4.90	-0.04	-0.64	.76
BFI Openness	3.68	0.51	1.80	4.80	-0.13	-0.12	.68
BIS	2.07	0.34	1.00	3.00	-0.02	0.49	.74
BPAQ Anger	3.13	0.81	1.40	5.40	0.36	-0.30	.67
BPAQ Hostility	3.53	1.08	1.00	6.40	-0.12	-0.16	.74
BPAQ Physical aggression	2.57	0.97	1.00	5.00	0.34	-0.68	.77
BPAQ Verbal aggression	3.57	1.26	1.00	6.6	0.04	-0.55	.76
CAST Physical sadism	1.60	0.75	1.00	5.00	1.33	1.53	.67
CAST Verbal sadism	2.14	0.99	1.00	5.00	0.66	-0.46	.67
CAST Vicarious sadism	2.35	0.93	1.00	5.60	0.86	0.06	.72
RPQ Proactive aggression	1.18	0.26	1.00	2.10	1.57	1.41	.79
RPQ Reactive aggression	1.62	0.35	1.00	2.80	0.23	0.03	.83

### Picture selection task

A 2 (Picture type: Aversive vs. Neutral) x 2 (Modality: Commission vs. Omission) repeated measures ANOVA was conducted, examining picture selection. Results found a main effect of picture type, but no main effect of modality, nor a picture type by modality interaction (Table 2). These results were supported by Bayesian analyses, which showed that the null hypothesis was more probable than the alternative hypothesis for the picture type by modality interaction, suggesting that ABO and ABC are the same.

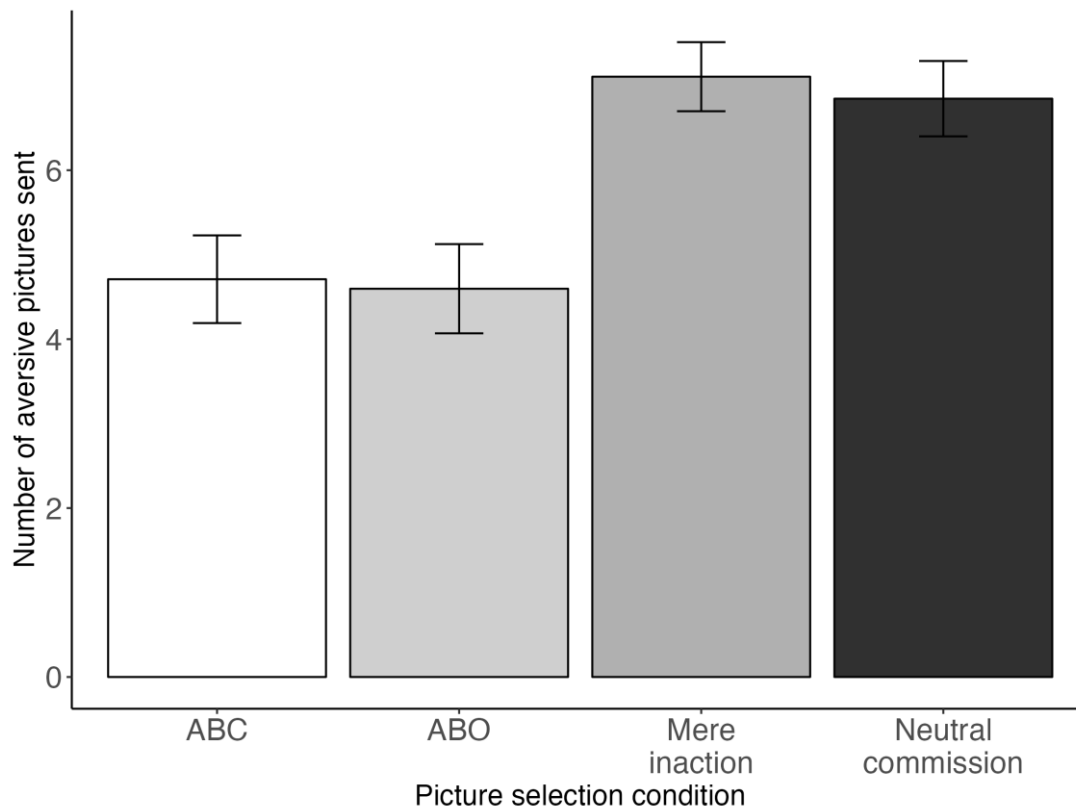
*Table 2. Results of 2 x 2 within-subjects ANOVA examining number of pictures sent.*

Effect	$F(1, 195)$	$p$	$\eta_p^2$	Bayes Factor
Picture type	55.50	< .001	.22	2.67e <sup>18</sup>
Modality	0.09	.766	< .01	0.08
Picture type X Modality	1.72	.192	< .01	0.15

*Note: In order to isolate Bayes factors for each effect, we included all prior factors in the null model (i.e., for the Modality effect, Picture type was included in the null model, for the picture type x modality effect, picture type and modality were included in the null model)*

In addition, we conducted two preregistered planned contrasts between conditions. Our first planned contrast, comparing aversive-commission (i.e., ABC) to aversive-omission (i.e., ABO), was not significant,  $t(310.13) = -0.39$ ,  $p = .695$ , Cohen's  $d = 0.03$  [95% CI: -0.17, 0.23], although the second, between ABO and neutral-omission (i.e., mere inaction), was significant,  $t(272.64) = -7.32$ ,  $p < .001$ , Cohen's  $d = 0.74$  [95% CI: -0.95, -0.54], with picture selection in the ABO block being significantly lower than in the mere inaction block (Figure 2).

Figure 2. Mean number of target pictures sent per picture type and modality in Study 1.



Note: Bars represent means, errors bars represent 95% CI around the mean.

### Bivariate correlations

Bivariate correlations between all variables can be found in Table 3 (full correlation matrices between all variables can be found in supplemental materials S2). In support of convergent validity of our ABO measure, ABO was significantly positively correlated with ABC, negatively correlated with agreeableness, as well as positively correlated with physical aggressiveness. When comparing correlation coefficients between ABC and ABO, it appears that ABO is more strongly correlated with agreeableness, anger, reward responsivity, physical Sadism, verbal Sadism, vicarious Sadism, and proactive aggression, suggesting that ABO may be more strongly linked to malevolent personality traits than ABC. In support of discriminant validity of our ABO

measure, ABO was not correlated with mere inaction—suggesting that ABO is not just a withdrawal of general behavior or merely refusing to act.

*Table 3. Bivariate correlations between aggression and trait measures in Study 1.*

Variable	ABC	ABO	Z-score comparison for correlations
ABC	—		
ABO	.45***	—	
Mere inaction	-.33***	-.08	-3.43***
BAS Drive	-.14*	-.14	0.00
BAS Fun-seeking	-.16*	-.05	-1.47
BAS Reward responsivity	-.20**	.07	-3.61***
BFI Agreeableness	-.02	-.15*	1.73*
BFI Conscientiousness	-.10	-.14	0.54
BFI Extraversion	-.01	-.07	0.80
BFI Neuroticism	-.06	.01	-0.93
BFI Openness	-.08	-.16*	1.07
BIS	-.01	.04	-0.66
BPAQ Anger	-.01	.19**	2.41**
BPAQ Hostility	.00	.10	-1.20
BPAQ Physical aggression	.14*	.21**	-0.95
BPAQ Verbal aggression	.10	.15*	-0.67
CAST Physical sadism	-.02	.19**	-2.81**
CAST Verbal sadism	-.03	.15*	-2.40**
CAST Vicarious sadism	-.02	.18*	-2.67**
RPQ Proactive aggression	-.07	.28**	-4.72***
RPQ Reactive aggression	-.01	.11	-1.59

*Note.* BAS = Behavioral Activation System, BFI = Big Five Inventory, BIS = Behavioral inhibition system, BPAQ = Buss-Perry Aggression Questionnaire, CAST = Comprehensive Assessment of Sadistic Tendencies, RPQ = Reactive Proactive Questionnaire; \* $p < .05$ , \*\* $p < .01$ , \*\*\* $p < .001$ ;  $N = 196$

To explore whether these null trait associations were due to a decay in the effect of provocation over the course of the task, we compared the size of ABO/ABC correlations with each trait from (A) the first trial of that condition and (B) all trials of that condition. We did not find any substantive differences in the size of these correlations between those who were initially assigned to one of these conditions and the full sample (Supplemental Materials S4).

### **Study 1 sensitivity analysis**

We conducted a post-hoc sensitivity analysis using G\*Power in order to determine the smallest effect size that we could detect. Sensitivity analyses for our 2 x 2 repeated measures ANOVA found that with a sample of 196 participants, we could detect effects as small as  $\eta_p^2 = .007$ , considerably smaller than our smallest effect. For our bivariate correlations, our sensitivity analyses found that with 196 participants, we could detect effects as small as  $|.14|$ , a small-to-medium effect size by recommended benchmarks (e.g., Cohen, 1988; Lovakov & Agadullina, 2021).

### **Study 1 Discussion**

This preliminary first study found that participants were overall less likely to send aversive pictures to their partner than neutral pictures after being provoked, whether this was by their direct commission or by their withholding of mitigating behavior. This suggests that participants did consider these pictures to be harmful, and sent them with a motivation to induce distress. The study further found that ABO and ABC were strongly correlated and were not significantly different from each other. This suggests that ABO is indeed a form of aggression. Furthermore, ABO was not correlated with, and significantly different from a neutral-omission condition, which suggests that ABO is not merely participants choosing not to act—but withholding behavior with the specific knowledge and intent to cause harm. In addition, because many of these correlations were exploratory in nature, any conclusions drawn from their significance or nonsignificance should be considered carefully. Nevertheless, we believe that these preliminary findings have value for disentangling ABO and ABC, and should aid future research on the disposition towards these forms of aggression and attempts to replicate

these preliminary results. Due to the COVID-19 pandemic, this study was collected entirely online, and thus lacked the proper control and structure of a laboratory paradigm. It is unclear why ABO and ABC were not related, or only weakly related, to previously-established correlates of aggression. This may be due to the above-mentioned problems with data quality in the online study, as there was a larger degree of missing data in the trait aggression measures administered towards the end of the study, when participants may have been more fatigued. This may have led to weak relationships. Furthermore, the present study includes an element of provocation, but not an unprovoked group for comparison. Thus, it can only make conclusions about reactive (but not proactive) ABO, which leaves out an entire modality of aggression that also deserves investigation.

## **Study 2**

Study 2 was conducted in order to replicate the results of Study 1 within a controlled laboratory setting, as well as examine the effect of provocation on ABO.

## **Method**

The preregistered research plan for this study can be found at <https://osf.io/5trsh>; data and materials can be found at <https://osf.io/h9ejg>. Our hypotheses were as follows: we hypothesized that participants in the negative feedback condition, relative to the positive feedback condition, would have greater levels of ABO and ABC. Furthermore, we expected that participants would show similar rates of ABO and ABC, as determined by ANOVA planned contrasts. In support of convergent validity, we expected that ABC and ABO would be positively correlated with each other. In addition, we expected that both ABC and ABO would be negatively correlated with agreeableness. Finally, we

expected that ABC and ABO would be positively correlated with all facets of trait aggression. In order to test discriminant validity of our ABO paradigm, we expected that ABO would be significantly different from "mere inaction" and not significantly correlated with "mere inaction." All other correlational analyses were considered exploratory.

## **Participants**

Our initial sample consisted of 250 undergraduates from a large university in the south-eastern United States. We removed seven participants for technical difficulties that arose during data collection (e.g., computer crashes; one from the negative feedback condition, the other six did not reach the point in the Qualtrics survey wherein their condition was randomized) and another 23 who requested that their data be deleted at the end of the study (12 from the positive feedback condition, 11 from the negative feedback condition). This left a final sample of 220 (mean age = 19.24, SD = 1.98, range = 18–31). Most participants (66.36%) identified as women, followed by men (30.01%), another gender identity (3.18%), and 0.45% preferred to self-describe their identity. Participants commonly identified as White (36.36%), followed by Black or African American (23.18%), East or Southeast Asian (20.91%), Hispanic (9.09%), Middle-Eastern/Arabic (3.18%), another racial identity (6.36%), and 0.91% did not disclose their race/ethnic identity.

## **Materials**

### ***Omission/Commission Aggression Paradigm.***

Provocation was elicited using the same essay feedback paradigm as Study 1, but we manipulated provocation (full details regarding the specific feedback that participants received can be found in Supplemental Materials S1). Participants were

randomly assigned to either a negative feedback condition ( $N = 111$ ) or a positive feedback condition ( $N = 109$ ). In the negative feedback condition, participants received negative feedback from an ostensible, but fake, partner on an essay that participants write (e.g., “One of the worst essays I have ever read”). In the positive feedback condition, participants received positive feedback on their essay (e.g., “Great essay”). Similar to Study 1, the operational definition in each condition was the number of pictures sent (either aversive or neutral). Scores could range from 0 to 10.

***Victim suffering scale (VSS; Chester et al., 2019).***

The VSS is an eight-item scale used to measure an individual’s perceived harmful outcomes of their aggressive acts (e.g., “caused them to feel real pain”). Participants were asked to rate the degree to which they agree with each statement on a scale from 1 (*Strongly disagree*) to 7 (*Strongly agree*). Participants completed the VSS after each picture selection block. The mean VSS score was used.

***Trait Measures***

**International Personality Item Pool NEO-60 (IPIP-NEO-60; Goldberg, 1999; Goldberg et al., 2006; Maples-Keller et al., 2019).** The IPIP NEO-60 is a commonly used 60-item scale measuring the Big Five model of personality traits: Agreeableness (12 items; e.g., “I sympathize with the homeless”), Conscientiousness (12 items; e.g., “I like order”), Extraversion (12 items; e.g., “I love large parties”), Neuroticism (12 items; e.g., “I get irritated easily”), and Openness to experience (12 items; e.g., “I prefer variety to routine”). Participants were asked to rate the degree to which they agree or disagree with each statement on a scale from 1 (*Strongly disagree*) to 5 (*Strongly agree*). The mean score for each subscale was used.



**Buss-Perry Aggression Questionnaire (BPAQ; Buss & Perry, 1992).** Similar to Study 1, we assessed trait aggression using the BPAQ. Participants were asked to rate the degree to which they feel each statement is characteristic of them on a scale from 1 (*Extremely uncharacteristic of me*) to 7 (*Extremely characteristic of me*). The mean score for each subscale was used.

### **Procedure**

All procedures were conducted using a Qualtrics survey. After consenting, participants completed the IPIP NEO-60 to strengthen the cover story that the primary study was interested in personality and writing. They were then asked to write an essay about a situation that made them angry, ostensibly designed to assess their writing ability. Participants were told that they would be exchanging their essay with another participant who signed up for the same timeslot and who would evaluate their essay (in reality, the other participants' essay and feedback are fake and created by the researchers). After completing the essay, participants read the essay from their partner and rated it on quality and clarity. Participants then received their partner's ratings, either negative or positive. Following this feedback, participants were told that they were participating in an ostensibly unrelated second study with the same partner. Participants then completed the four blocks of the picture selection task (as in Study 1, the order of the blocks were counterbalanced). Following each picture selection block, participants completed the VSS. After completing all 40 trials, participants completed the BPAQ and then were debriefed. Similar to Study 1, we did not include suspicion probes.

### **Data analytic strategy**

As in Study 1, picture selection trials were recoded such that the display of the target image (i.e., selecting to show the aversive image in the commission trials and not stopping the aversive image in the omission trials) was represented as 1 in each trial, the total number of trials were then summed to create an index of picture assignment. In accordance with our preregistration, missing data in the trait measures were replaced using multiple imputation predictive mean metric with the *mice* package version 45i03 (van Buuren & Groothuis-Oudshoorn, 2011) in R version 4.0.5 (R Core Team, 2021). Similar to Study 1, we conducted a post-hoc, non-preregistered Bayesian mixed ANOVA in order to estimate the probability of the null hypothesis for each effect. As in Study 1, which used the maximal set of random effects model and a default prior probability specification for a mixed ANOVA in JASP of 0.2. We used the Bayes factor to compare all models to the null model. All analyses were conducted using JASP version 0.16.1 (JASP Team, 2022).

## **Results**

### **Descriptive statistics**

Descriptive statistics can be found in Table 4.

Table 4. Descriptive Statistics and scale reliability for Study 2 Measures

Scale	Mean	Std. Deviation	Min	Max	Skewness	Kurtosis	Alpha
ABC	3.12	3.18	0	10	0.77	-0.59	
ABO	3.30	3.34	0	10	0.68	-0.77	
Neutral-Commission	7.31	2.7	0	10	-0.91	0.24	
Mere inaction	7.73	2.44	0	10	-1.04	0.60	
ABC VSS	2.11	1.31	1.00	6.43	1.17	0.50	.95
ABO VSS	2.12	1.33	1.00	7.00	1.32	1.40	.95
Neutral-Commission VSS	1.20	0.54	1.00	4.29	3.72	15.19	.97
Mere inaction VSS	1.23	0.57	1.00	4.00	3.34	11.85	.97
BPAQ Anger	2.9	1.1	1	5.7	0.43	-0.6	0.8
BPAQ Hostility	3.7	1.2	1	6.8	0.15	-0.4	0.8
BPAQ Physical aggression	2.7	1	1	6.2	0.37	-0.4	0.8
BPAQ Verbal aggression	3.5	1.2	1	6.6	0.25	-0	0.7
NEO-IPIP Agreeableness	3.9	0.5	3	4.9	-0.6	0.05	0.7
NEO-IPIP Conscientiousness	3.5	0.6	2	4.8	-0.3	0.25	0.8
NEO-IPIP Extraversion	3.6	0.6	1	4.9	-0.4	-0.2	0.8
NEO-IPIP Neuroticism	3.1	0.7	1	4.8	-0.1	-0.3	0.8
NEO-IPIP Openness	3.5	0.4	2	4.4	-0.2	-0.2	0.4

Picture selection task

A 2 (Picture type: Aversive vs. Neutral; within-subjects) x 2 (Modality: Commission vs. Omission; within-subjects) x 2 (Provocation condition: Negative feedback vs. Positive feedback; between-subjects) mixed ANOVA. We found a main effect of picture type, a main effect of condition, a main effect of modality, and a picture type by condition interaction. We did not find a picture type by modality nor a modality by condition interaction (Table 5). These findings were bolstered by Bayesian analyses, which suggested that the null hypothesis was more probable than the alternative hypothesis for the picture type by modality interaction, the modality by condition interaction, and the picture type by modality by condition interaction. Although the main effect of modality was significant, the Bayes factor suggested that the null hypothesis was more probable than the alternative hypothesis.

*Table 5. Mixed ANOVA main effects and interactions on number of pictures sent from Study 2.*

Effect	$F(1, 218)$	$p$	$\eta_p^2$	Bayes Factor
Picture type	243.84	< .001	.53	1.84e <sup>84</sup>
Modality	4.02	.046	.02	0.16
Condition	9.71	.002	.04	1.21
Picture type X Modality	1.19	.276	< .01	0.11
Picture type X Condition	17.7	< .001	.08	9.64e <sup>6</sup>
Modality X Condition	0.27	.604	< .01	0.10
Picture type X Modality X Condition	0.34	.560	< .01	0.33

*Note. In order to obtain Bayes factors for each effect, we included all prior effects in the null model (e.g., for the Modality effect, Picture type was included in the null model, for the picture type x modality effect, picture type and modality were included in the null model)*

We conducted several preregistered contrasts between conditions (Table 6). Planned contrasts showed that regardless of modality and condition, participants sent fewer aversive pictures than neutral pictures. Probing the Picture type x Condition

interaction, participants sent more aversive pictures when they received negative feedback than positive feedback (Figure 3). Planned contrasts showed that participants who received negative feedback showed greater levels of ABC and greater levels of ABO, compared to those who received positive feedback. Furthermore, ABC and ABO were not significantly different from each other in either the negative feedback condition or the positive feedback condition. In addition, ABO was significantly lower than mere inaction in both the negative feedback condition and the positive feedback condition (full means and standard deviations for all cells can be found in Supplemental Materials S3).

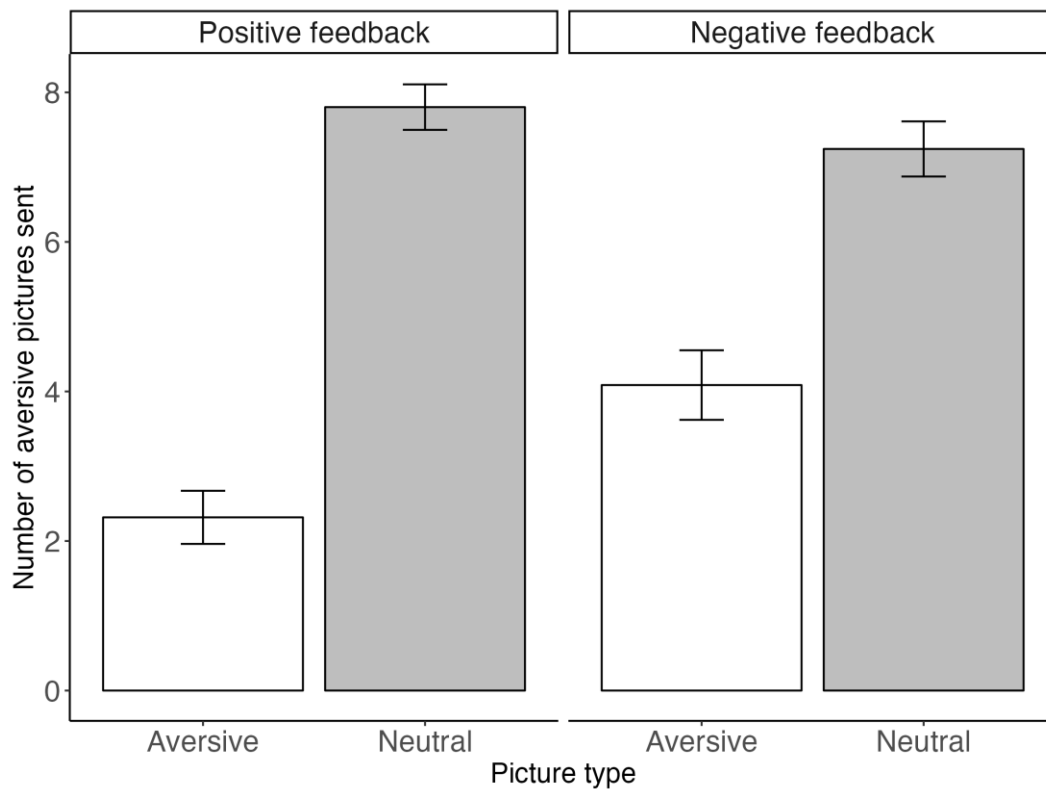
*Table 6. Study 2 planned contrasts between mixed ANOVA effects*

Contrast	<i>t</i>	<i>df</i>	<i>p</i>	Cohen's <i>d</i>
Overall aversive pictures vs. Overall neutral pictures	-15.62	218	< .001	-2.12
Negative feedback aversive pictures vs. Positive feedback aversive pictures	5.23	390.66	< .001	0.18
Negative feedback ABC vs. Positive feedback ABC	4.20	612.86	< .001	0.34
Negative feedback ABO vs. Positive feedback ABO	4.95	612.86	< .001	0.40
Negative feedback ABC vs. Negative feedback ABO	1.19	410.69	.233	0.12
Positive feedback ABC vs. Positive feedback ABO	0.10	410.69	.918	0.01
Negative feedback ABO vs. Negative feedback mere inaction	-13.34	291.05	< .001	1.56
Positive feedback ABO vs. Positive feedback mere inaction	-7.62	291.05	< .001	0.89

*Note.* ABC = Aggression by Commission, ABO = Aggression by Omission

Overall, these results further support the idea that ABO is not mere inaction, but is inaction intended to cause harm. Furthermore, ABO and ABC are equally affected by provocation.

Figure 3. Study 2 Picture type x Condition interaction.



Bars represent means, error bars represent 95% CI around the mean.

### Bivariate Correlations

Bivariate correlations between ABO, ABC, and discriminant validity scales can be found in Table 7 (full correlation matrices between all variables can be found in supplemental materials S2). ABO and ABC were strongly positively correlated with each other in both the negative and positive feedback conditions, as Study 1 had found, and in further support of the convergent validity of ABO. Yet in contrast to Study 1, both ABO and ABC were negatively correlated with mere inaction in both conditions. Although this does not provide evidence of the orthogonality of ABO and mere inaction, as Study 1 did, this negative correlation still provides evidence of discriminant validity of our ABO measure, as the same people who refuse to prevent noxious stimuli to be sent

to a target are not the same people who refuse to prevent neutral stimuli being sent. Among Big Five factors, ABO and ABC were negatively correlated with agreeableness in the negative feedback condition, but only ABC was significantly correlated with agreeableness in the positive feedback condition. In addition, ABC and ABO were negatively correlated with neuroticism in the positive feedback condition, but not in the negative feedback condition. Both ABC and ABO were positively correlated with physical aggression in the negative feedback condition, but only ABC was correlated with physical aggression in the positive feedback condition. ABC (but not ABO) was positively correlated with verbal aggression in the negative feedback condition, and neither were significantly correlated with verbal aggression in the positive feedback condition. Neither ABC nor ABO were correlated with hostility in either condition. We next used Fisher's *r*-to-*Z* transformation to test the differences in strength between the ABO and ABC correlation coefficients in order to get a better sense of discriminant validity. The only significant comparisons were between physical aggression in the positive feedback condition, such that ABC was more strongly correlated with physical aggression than ABO, and verbal aggression in the negative feedback condition, such that ABC was more strongly correlated with verbal aggression than ABO.

Table 7. Bivariate correlations between aggression and discriminant validity measure in Study 2 split by condition.

Scale	Positive feedback			Negative feedback		
	ABC	ABO	Z score difference	ABC	ABO	Z score difference
ABC	--			--		
ABO	.52**	--		.72**	--	
Mere inaction	-.34**	-.29**	-0.56	-.35**	-.28**	-1.03
BPAQ Anger	.04	.04	< .01	.18	.13	0.70
BPAQ Hostility	.08	.09	-0.11	.10	.08	0.28
BPAQ Physical aggression	.26**	.07	2.04*	.38**	.28**	1.49
BPAQ Verbal aggression	.04	.04	< .01	.24*	.05	2.68*
IPIP-NEO Agreeableness	-.27**	-.18	-0.98	-.22*	-.27**	0.72
IPIP-NEO Conscientiousness	.13	.01	1.27	.09	.08	0.14
IPIP-NEO Extraversion	.12	-.01	1.37	.23*	.26**	-0.43
IPIP-NEO Neuroticism	-.23*	-.22*	-0.11	-.09	-.06	-0.42
IPIP-NEO Openness	-.08	-.08	< .01	-.12	-.12	< .01

Note: BPAQ = Buss-Perry Aggression Questionnaire, IPIP-NEO = International Personality Item Pool-NEO; \* $p < .05$ , \*\* $p < .01$ ; Negative feedback  $N = 109$ , Positive feedback  $N = 111$ .

### Perceived victim suffering

Although the number of pictures sent to partners did not differ between ABC and ABO (whether the participant was provoked or not), it may nonetheless be the case that individuals consider ABO as less harmful than ABC—despite the fact that, in this study, the objective level of harm is the same. In order to test this, we conducted a 2 (Picture type: Aversive vs. Neutral) x 2 (Modality: Commission vs. Omission) repeated measures ANOVA on mean VSS scores. This analysis was not preregistered and was considered exploratory in nature.

We found a main effect of picture type, such that aversive pictures were perceived as more harmful than neutral pictures. We did not find a main effect of modality, nor a picture type by modality interaction (Table 8, Figure 4).



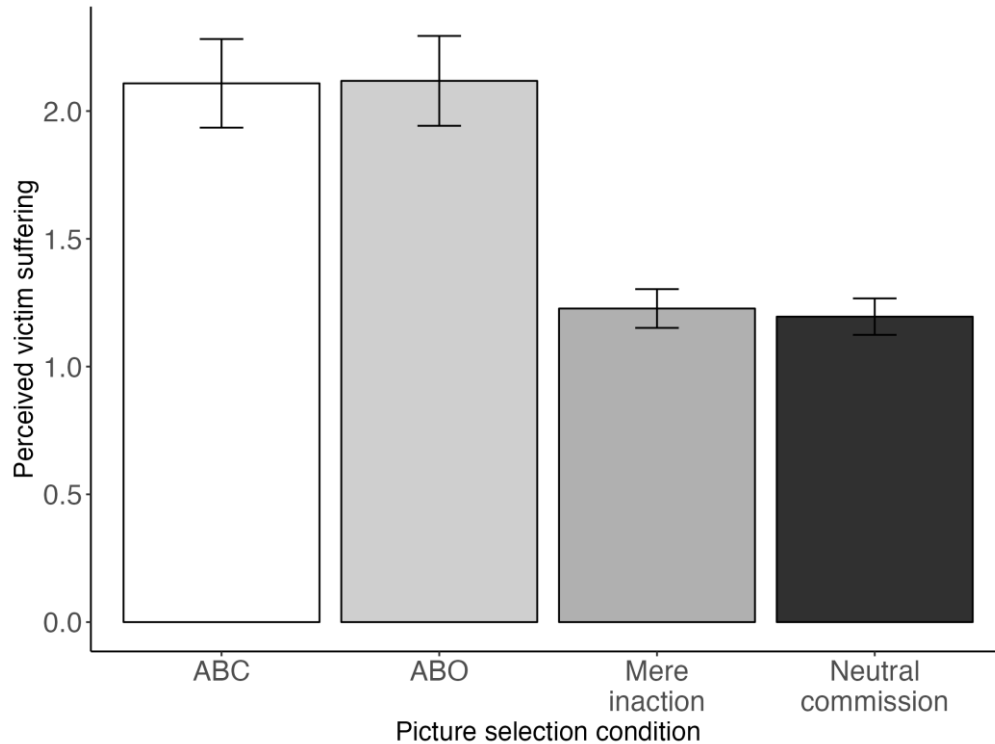
Table 8. Results of 2 x 2 within-subjects ANOVA examining perceived harm of pictures sent.

Effect	$F(1, 219)$	$p$	$\eta_p^2$	Bayes Factor
Picture type	130.59	< .001	.37	1.92 x 10 <sup>43</sup>
Modality	0.22	.637	< .01	0.08
Picture type X Modality	0.06	.805	< .01	0.11

Note: In order to obtain Bayes factors for each effect, we included all prior factors in the null model (i.e., for the Modality effect, Picture type was included in the null model, for the picture type x modality effect, picture type and modality were included in the null model)

Furthermore, one-sample  $t$ -tests showed that mean VSS scores for both ABC,  $t(219) = 12.53$ ,  $p < .001$ , and ABO,  $t(219) = 12.46$ ,  $p < .001$ , were significantly greater than the lowest scale point (i.e., 1). Thus, participants perceived that ABC and ABO were both harmful in this study, although no different in harm from each other (Figure 4).

Figure 4. 2 x 2 ANOVA of picture type and modality on perceived victim suffering in Study 2.



*Note: Bars represent means; error bars represent 95% CI around the mean.*

### **Study 2 sensitivity analysis**

As in Study 1, we conducted post-hoc sensitivity analyses for our picture selection 2 x 2 x 2 mixed ANOVA, our trait bivariate correlations, and the VSS 2 x 2 repeated measures ANOVA. Our sensitivity analyses showed that with 220 participants, our 2 (Provocation: Negative feedback vs. Positive feedback) x 2 (Picture type: Aversive vs. Neutral) x 2 (Modality: Commission vs. Omission) picture selection mixed ANOVA would be able to detect effect sizes as small as  $\eta_p^2 = .007$ , and that our 2 (Picture type: Aversive vs. Neutral) x 2 (Modality: Commission vs. Omission) VSS repeated measures ANOVA would be able to detect effects as small as  $\eta_p^2 = .006$ . Therefore, we believe that our design and sample size were adequately powered for these analyses. A sensitivity analyses of our bivariate correlations showed that samples 109 and 111 participants (for unprovoked and provoked conditions respectively) could detect two-

tailed effects as small as  $r = .19$ , a small-to-medium effect. It is possible, thus, that the non-significant correlation between anger and provoked ABC/ABO is due to insufficient power.

### Study 2 Discussion

Our second study demonstrated further evidence for aggression by omission in a controlled laboratory study in addition to examining the influence of provocation on aggression. Similar to Study 1, these results further support the idea that ABO is *not* mere inaction, but is inaction motivated to cause harm. Furthermore, ABO and ABC were behaviorally indistinguishable, similar to Study 1, and were equally affected by provocation. Participants recognized the harm of ABO, as evidenced both by the number of pictures they sent and their VSS ratings. Although it might be assumed that causing harm through inaction could be viewed as less harmful—at least from the participant's perspective—than harm caused through direct action, participants rated the ABC they caused just as harmful as ABO.

In addition, the pattern of correlations between ABO, ABC, and our discriminant validity scales were closer to what we expected than the results of Study 1, with ABO and ABC sitting within a common antagonistic nomological network. ABO was not correlated with verbal aggression in either condition, and ABC was only correlated with verbal aggression in the provoked condition. This may be partially due to the study paradigm—as the harm caused by the aversive pictures is more similar to physical aggression than verbal aggression. However, ABC was more strongly linked to trait verbal and physical aggression on the BPAQ, which may suggest that the two subscales measure tendencies towards ABC more so than ABO. Indeed all of the acts

described by the BPAQ physical (“e.g., Once in a while I can't control the urge to strike another person) and verbal subscales (e.g., “I tell my friends openly when I disagree with them”) constitute ABC.

### **Integrative Data Analysis**

In order to compare the overall relationships between ABO, ABC, and our discriminant validity measures, we conducted an integrative data analysis (IDA; Curran & Hussong, 2009). IDAs are a family of multilevel models that simultaneously analyze multiple, pooled datasets. We conducted IDAs using the *lme4* package (Bates et al., 2015) version 1.1-32 for R version 4.0.5 (R Core Team, 2021) modeling the following sources of variance: participant (Level 1) and study number (Level 2) testing the effects of each discriminant validity variables that were shared between Study 1 and Study 2 (i.e., Agreeableness, Anger, Conscientiousness, Extraversion, Hostility, Neuroticism, Openness, Physical Aggression, and Verbal Aggression) on ABO and ABC scores. Because all participants were provoked in Study 1, and the relationships between trait predictors and ABO/ABC differed by feedback condition in Study 2, we elected to only use participants who received negative feedback in Study 2 in our IDA.

Results found that among participants who received negative feedback, when pooled across both studies, ABC was positively linked to physical aggression and verbal aggression (Table 9). However, it was not linked to other facets of trait aggression (i.e., anger, hostility) or antagonism. ABO was consistently negatively linked to agreeableness and openness, and positively linked to anger, physical aggression, and verbal aggression. The relationship between ABO, and openness is especially curious, as many studies found inconsistent evidence for a stable link between Big Five

openness and aggression, with some studies showing a negative link (e.g., Hyatt et al., 2020), while others have found a positive relationship (e.g., West & Chester, 2021) or no link at all (e.g., Chester & DeWall, 2018; Hosie et al., 2014).

*Table 9. Integrative Data Analysis on Studies 1 and 2 trait scales.*

Discriminant Validity scale	Aggression by Commission			Aggression by Omission		
	$\beta$	$t$	$p$	$\beta$	$t$	$p$
Agreeableness	-0.31	-1.53	.127	-0.69	-3.39	< .001
Anger	0.18	0.87	.388	0.62	2.96	< .001
Conscientiousness	-0.11	-0.53	.598	-0.22	-1.03	.306
Extraversion	0.26	1.24	.218	0.16	0.74	.459
Hostility	0.12	0.57	.568	0.33	1.55	.123
Neuroticism	-0.26	-1.23	.218	-0.05	-0.24	.811
Openness	-0.32	-1.57	.117	-0.51	-2.51	.013
Physical aggression	0.79	3.92	< .001	0.85	4.16	< .001
Verbal aggression	0.53	2.56	.011	0.42	1.98	.049

*Note: All participants included in the IDA received negative feedback; total N = 307*

### General Discussion

Although originally outlined by Buss in 1961, passive aggression has been largely understudied and misconstrued, to the degree that, in order to properly study and discuss its classical definition, it is necessary to rename the construct. In these studies, we have redefined passive aggression as Aggression by Omission (ABO)—referring to the deliberate withholding of harm-mitigating actions in order to ensure that harm comes to a target. Across two studies, we demonstrated evidence for the existence of ABO, as well as showing that it is closely related to Aggression by Commission (ABC), and similarly affected by provocation.

Previous conceptualizations have discussed passive aggression (e.g., Richardson & Hammock, 2011) as indirect (i.e., administered through a third party) and social (i.e., undermining social relationships); however, within our studies, we placed

ABO and ABC in the same modality—direct physical aggression. Thus, we were able to compare the intrinsic differences between two modalities of aggression. To this end, there did not appear to be any such intrinsic differences between the two. These null results support the inclusion of ABO within the broader umbrella of aggression—rather than being merely a refusal to act.

Although some conceptualizations of ABO have suggested that it is less severe, or less harmful, compared to active aggression (e.g., Berkowitz et al., 1989; Richardson & Hammock, 2011), this may have been more of a product of the paradigms used rather than an actual characteristic. In addition, moral psychology research has shown that individuals tend to view harm that is caused by commission as more severe and immoral than harm caused by inaction (e.g., Baron & Hershey, 1988; Jamison et al., 2020; Spranca et al., 1991). In our study, we kept the objective level of harm the same between ABO and ABC, but measured participants' perceived level of harm for both types of aggression. Contrary to these conceptualizations and research, we found that participants rated both the harm they caused by action to be just as severe as the harm that they caused by inaction. This is especially surprising, as participants may be motivated to use the fact that they allowed the harm to happen rather than cause the harm themselves in order to downplay the harm caused, and thus, their culpability.

ABO and ABC also appear to show a similar nomological network—with the exception of the Buss-Perry Aggression Questionnaire. However, this is most likely an artifact of the questionnaire, as all of the example behaviors in the physical and verbal subscales exclusively describe ABC. Thus, a trait aggression measure that assess aggression by omission is necessary to fully understand how it fits within other

antagonistic constructs. Indeed, although it is outside of the scope of the current paper, we are conducting qualitative research asking individuals to describe the forms that their ABO took in their daily lives in order to develop a trait ABO measure.

### **Limitations and future directions**

A clear limitation of the current studies is the inconsistent bivariate correlations between ABC, ABO, and our discriminant validity measures across studies 1 and 2. Although different Big Five measures were used across the two studies, we do not believe that this alone would explain the inconsistencies. Study 1 was collected using a purely online sample during the height of the COVID-19 pandemic, and the discriminant validity measures were included at the very end of an approximately hour-long session. It is possible that the format of the study or participant fatigue may have led to poor data quality, which may partially explain the unexpected null correlations between aggression and our discriminant validity measures. Correlations were much closer to what we expected in the controlled laboratory environment of Study 2, leading credence to this hypothesis.

Furthermore, we used a novel paradigm to measure aggression involving the delivery of aversive images, in order to allow symmetrical ABO and ABC conditions. Although the fewer number of aversive pictures sent relative to the number of neutral pictures, as well as the results of the VSS, suggest that individuals clearly consider the act of sending such pictures aggressive, the paradigm is yet to be fully validated. However, there does not exist a standard and validated aggression paradigm designed to explicitly measure ABO. In order to continue to research this phenomenon, the presently used paradigm will need further validation, and new aggression tasks will be

required. In addition, in order to maximize the impact of our provocation manipulation, we chose to compare participants who received negative feedback to those who received positive feedback. Although this kind of manipulation has been used in aggression research (e.g., Barlett & Anderson, 2011), it does not contain a true control condition (i.e., neutral feedback). Thus, it is possible that the differences in ABO and ABC by condition may be due to the mitigating effect of positive feedback rather than the exacerbating effect of negative feedback. Future studies should include a neutral, no feedback, condition in addition to positive and negative feedback.

As previously mentioned in this paper, aggression, as a phenomenon, is most directly classified by the proximate intent to harm another person (rather than being defined by the deleterious outcome or the given behavior that is executed). A clear limitation of this study, thus, is our inability to specifically isolate or measure participants' aggressive motivation. Most often in aggression research, we are simply left to infer the presence of such intent by creating tasks in which participants are unequivocally aware that their administration of a noxious stimulus will harm someone. We have created this awareness in participants as much as any other study that employs conventional, gold-standard behavioral measures of aggression by commission. Indeed, the VSS results suggest that our paradigm was successful in creating this awareness of harm in participants. Nonetheless, future research should attempt to assess participants' motivations for ABO and ABC, possibly using a questionnaire such as the Aggressive Motives Scale (Anderson & Murphy, 2003).

The potential ambiguity surrounding whether participants believed that the aversive images would harm their opponent is a further limitation that was partially



imposed by our institution's research ethics board. Participants were able to view example pictures from each category (i.e., neutral and aversive pictures), but only if they specifically chose to do so. They did not see each picture that was sent to their partner. In addition, they did not receive feedback from their partner as to the level of discomfort the partner experienced while viewing the picture—although this would make for interesting follow-up research by experimentally manipulating such partner feedback. However, based on the results from the Victim Suffering Scale in Study 2, we are confident that participants viewed the distressing pictures as harmful. Indeed, prior research has found that the VSS positively correlates with measures of aggression (e.g., noise blasts delivered via the Taylor Aggression Paradigm; Chester et al., 2019). Thus, VSS scores being higher for ABO and ABC than the two neutral picture conditions lead us to conclude that participants recognized the harm caused by ABO and ABC, and inflicted them knowingly.

Admittedly, the paradigm used in this study is somewhat artificial, as everyday acts of aggression by omission likely do not consist of allowing distressing pictures to be sent to another individual. The intent of using this paradigm was to keep the ABO and ABC tasks identical in all respects excepting the key feature (i.e., aggression occurring via omission or commission). Although the paradigm may lack such mundane realism, it has strong psychological realism as evidenced by participants' responses to the Victim Suffering Scale, which suggests that participants clearly believed that delivering the aversive pictures inflicted harm on their target. Despite our ability to evoke perceptions of real harm, future research should both further validate this ABO measure and develop measures that more closely approximate 'real world' acts of ABO (e.g., the

“silent treatment”). Experience sampling studies, using methods as such as ecological momentary assessment, and qualitative, descriptive studies about everyday acts of ABO that individuals encounter, are also needed to identify the everyday forms that this behavioral phenotype takes.

### **Conclusions**

The present study examined aggression perpetrated by withholding action—what was classically called passive aggression but which we have termed aggression by omission. Aggression by omission was behaviorally indistinguishable from its more widely studied counterpart, aggression by commission, and showed a similar nomological network. We hope that the results of our studies will prompt future research and elaboration on this understudied construct, and greater attention to this modality of aggression.

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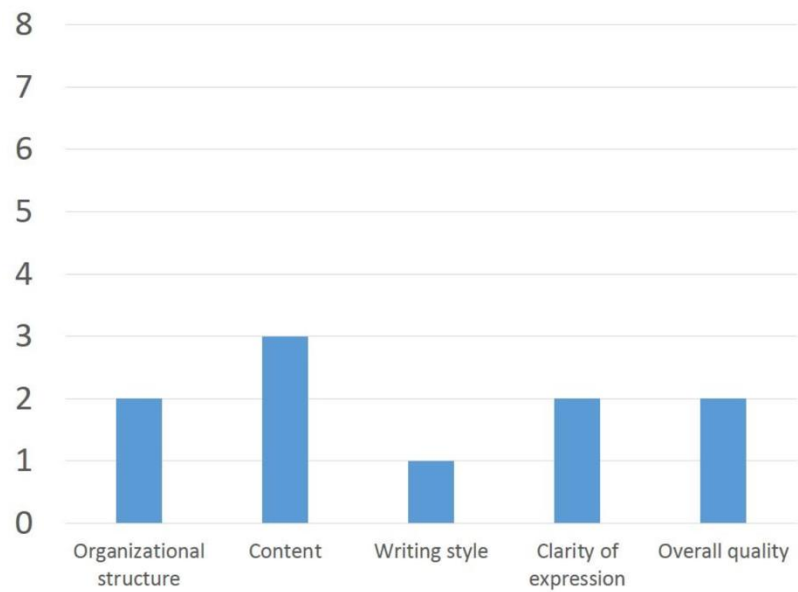
**Supplemental Materials S1  
Full Participant Feedback**

**Negative feedback condition (Studies 1 & 2)**

**Partner comments**

“One of the worst essays I have ever read”

**Essay ratings**

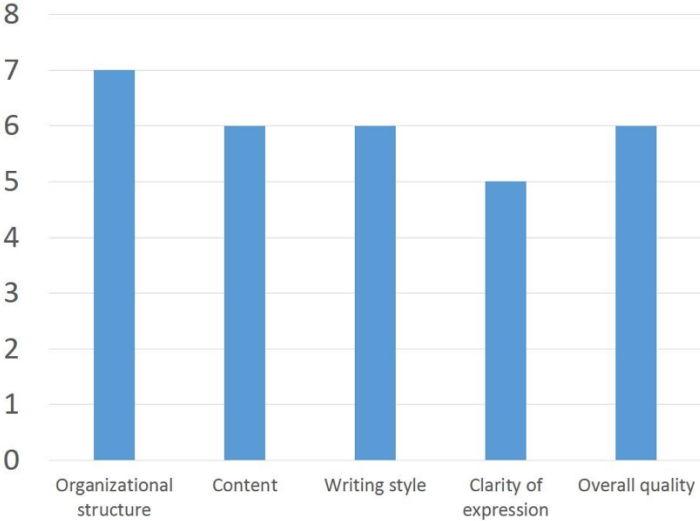


**Positive feedback condition (Study 2)**

**Partner comments**

“Great essay, well written”

**Essay Ratings**



Supplemental Materials S2

Full correlation matrices between all variables

Study 1

Table S2.1. Bivariate correlations between all measures used in Study 1

	Physical	Proactive	Reactive	Verbal	Verbal	Vicarious	Age	Binary
—								
.56***	—							
.31***	.49***	—						
.47***	.35***	.42***	—					
.65***	.56***	.37***	.41***	—				
.32***	.34***	.29***	.30***	.37***	—			
-.12	-.03	-.05	-.05	-.18*	-.04	—		
-.03	-.10	-.04	.02	-.15*	-.33***	.07	—	

	BAS Drive	BAS Reward	BIS	Conscientiousness	Extraversion	Hostility	Neuroticism	Openness	Physical
—									
.40***	—								
.14*	.28***	—							
-.01	-.05	.02	—						
-.32***	-.13	.18*	.11	—					
-.15*	.03	-.19**	-.27***	-.13	—				
.05	-.03	-.32***	-.31***	-.31***	.39***	—			
-.24***	-.13	< -.01	.02	.29***	-.06	-.03	—		
-.28***	.04	.03	-.23**	.04	.47***	.07	.01	—	
-.10	.23**	0.14	-.19**	.10	.32***	.04	.10	.51***	
-.03	.32***	.10	-.20**	.07	.31***	.09	.01	.47***	
-.12	-.06	-.10	-.21**	-.10	.50***	.34***	-.02	.54***	
-.15*	.02	.07	-.15*	.17*	.48***	.14*	.04	.50***	
-.10	.18*	.07	-.26***	.05	.32***	.03	.04	.51***	
-.04	.21**	.12	-.15*	.03	.16*	-.09	.02	.44***	
-.05	-.01	.06	.18*	.16*	-.21**	-.084	.11	-.07	
.13	.01	< .01	-.01	.02	.05	.25***	-.01	-.15*	

Variable	Aversive	Aversive	Neutral	Neutral	Agreeableness	Anger	BAS Fun-
Aversive	—						
Aversive Omission	.45***	—					
Neutral Commission	.10	-.36***	—				
Neutral Omission	-.33***	-.08	.10	—			
Agreeableness	-.02	-.15*	.07	-.02	—		
Anger	-.01	.19**	-.13	.02	-.37***	—	
BAS Fun-seeking	-.16*	-.05	-.02	.08	.02	-.04	—
BAS Drive	-.14*	-.14	.10	.06	.02	-.17*	.39***
BAS Reward	-.20**	.07	-.16*	.17*	-.14	.13	.37***
BIS	-.01	.04	-.03	.09	-.12	-.11	.14*
Conscientiousness	-.10	-.14	.03	.02	.35***	-.20**	.19**
Extraversion	-.01	-.07	-.03	.07	.12	.03	-.19**
Hostility	< .01	.10	< -.01	.01	-.32***	.53***	-.20**
Neuroticism	-.06	.01	-.03	< -.01	-.32***	.35***	< .01
Openness	-.08	-.16*	.04	.10	.15*	-.14	-.19**
Physical Aggression	.14	.21**	-.18*	< .01	-.24***	.48***	-.20**
Physical Sadism	-.02	.19**	-.20**	.10	-.30***	.28***	-.08
Proactive	-.07	.28***	-.35***	.09	-.27***	.33***	-.06
Reactive Aggression	-.01	.11	-.17*	-.01	-.31***	.48***	-.19**
Verbal Aggression	.10	.15*	-.10	.01	-.41***	.42***	-.09
Verbal Sadism	-.03	.15*	-.10	.02	-.33***	.34***	-.11
Vicarious Sadism	-.02	.18*	-.24***	-.01	-.11	.15*	-.07
Age	.02	-.02	.03	.01	.12	-.11	.01
Binary Gender	-.06	-.05	.02	.06	.06	.02	.08

Note: \* p < .05, \*\* p < .01, \*\*\* p < .001

Study 2

Table S2.2. Bivariate correlations between all measures used in Study 2.

	Conscientiousness	Extraversion	Hostility	Neuroticism	Openness	Physical Aggression	Verbal Aggression	Age	Binary Gender
	—								
	.34***	—							
	-.19**	-.28***	—						
	-.44***	-.49***	.40***	—					
	-.13	-.02	.07	.21**	—				
	-.16*	.15*	.29***	.02	-.01	—			
	-.19**	.03	.35***	.10	.10	.43***	—		
	.11	.20**	-.15*	-.23***	.08	-.15*	-.10	—	
	-.01	-.08	-.01	.20**	.10	-.25***	-.11	-.012	—

Variable	Aversive Commission	Aversive Omission	Neutral Commission	Neutral Omission	Agreeableness	Anger
Aversive Commission	—					
Aversive Omission	.67***	—				
Neutral Commission	-.16*	-.33***	—			
Neutral Omission	-.36***	-.30***	.36***	—		
Agreeableness	-.26***	-.26***	.15*	.09	—	
Anger	.14*	.11	-.02	-.05	-.21**	—
Conscientiousness	.07	.01	-.03	-.05	.13	-.34***
Extraversion	.18**	.14*	-.03	-.06	-.11	-.16*
Hostility	.13	.12	-.02	-.10	-.30***	.49***
Neuroticism	-.14*	-.12	.05	.06	.04	.53***
Openness	-.13	-.14*	.01	<.01	.07	.15*
Physical Aggression	.34***	.21**	-.03	-.07	-.41***	.42***
Verbal Aggression	.16*	.06	.07	-.05	-.33***	.46***
Age	-.19**	-.01	-.08	.09	.11	-.14*
Binary Gender	-.15*	-.18**	.11	.13	.23***	-.01

Note: \* p < .05, \*\* p < .01, \*\*\* p < .001

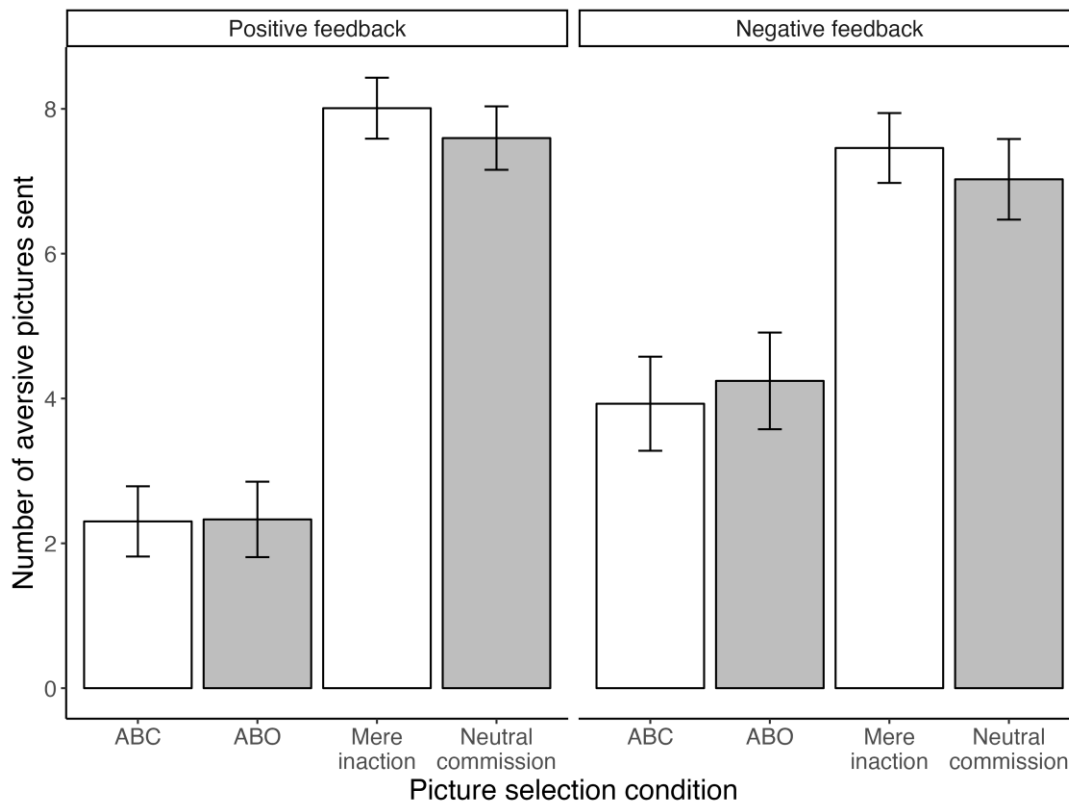
**Supplemental Materials S3**  
**Full descriptive statistics for Study 2 picture selection**

*Table S3. Means and Standard deviations for each picture selection condition by feedback condition.*

Picture selection condition	Feedback condition	<i>M</i>	<i>SD</i>
ABC	Positive	2.30	2.58
	Negative	3.93	3.49
ABO	Positive	2.33	2.78
	Negative	4.24	3.59
Mere inaction	Positive	8.01	2.24
	Negative	7.46	2.59
Neutral commission	Positive	7.60	2.33
	Negative	7.03	2.99

*Note: ABC = Aggression by Commission, ABO = Aggression by Omission*

*Figure S3. Descriptive bar chart of each picture selection condition separated by feedback condition. Bars represent means, error bars represent 95% CI around the mean.*





### Supplemental Materials

#### S4: Bivariate correlations between trait variables and ABO/ABC for participants who had ABO/ABC directly after negative feedback.

In order to investigate whether null trait associations were due to a decay in the effect of provocation over time, we conducted correlations between our trait measures and ABC (only among those who had the ABC condition first) and ABO (only among those who had the ABO condition first). Because of the small sample size ( $n = 45$  for ABC first,  $n = 45$  for ABO first), many of these correlations were not significant. And comparisons between ABC first and ABC overall and ABO first and ABO overall were not significant.

*Table S4. Bivariate correlations for participants who completed ABO/ABC first*

Trait scale	ABC First	ABC Overall	ABO First	ABO Overall
Agreeableness	-.14	-.02	-.32*	-.15*
Anger	.11	-.01	.01	.19**
BAS Drive	-.17	-.14	-.16	-.14
BAS Fun-seeking	-.15	-.16*	-.08	-.05
BAS Reward responsivity	-.06	-.20**	.03	.07
BIS	.16	-.01	.21	.04
Conscientiousness	-.37*	-.10	-.20	-.14
Extraversion	-.08	-.01	-.05	-.07
Hostility	.18	< .01	.12	.10
Neuroticism	.09	-.06	-.09	.01
Openness	-.15	-.08	-.12	-.16*
Physical aggression	.30*	.14*	.17	.21**
Physical Sadism	.14	-.02	.19	.19**
Proactive aggression	.14	-.07	.25	.28**
Reactive aggression	.15	-.01	-.04	.11
Verbal aggression	.26	.10	.26	.15*
Verbal Sadism	.14	-.03	.14	.15*
Vicarious Sadism	.08	-.02	.26	.18*

Note: \* $p < .05$ , \*\* $p < .01$