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Six dimensions of sexual disgust

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ABSTRACT

Sexual disgust is an emotion hypothesized to deter individuals from engaging in sexual activities that are probabilistically detrimental to fitness. Existing measures of sexual disgust are limited in treating sexual disgust as a unitary construct, potentially missing its multidimensional nature, and inadvertently ignoring important adaptive problems that this emotion evolved to solve. We conducted three studies to address these limitations. In Study 1, women and men (N = 225) nominated over 2,300 unique items that they considered sexually disgusting across a variety of different contexts. Study 2 (N = 331) identified a six-factor structure of the 50 most frequently nominated items: Taboo, Oral sex, Promiscuity, Hygiene, BDSM, and Same-sex attraction. Moreover, this study established construct validity with significant associations between sexual disgust and major dimensions of personality. Correlations between the Three Domains of Disgust Scale and our six-factor measure of sexual disgust established convergent validity. Study 3 (N = 318) confirmed the factor structure found in Study 2, established further convergent validity and examined sex differences and other individual differences in sexual disgust. Discussion focuses on the theoretical importance and psychometric validity of the Sexual Disgust Inventory–a new six-factor measure of sexual disgust.

1. Introduction

Disgust has increasingly been recognized as one of the basic human emotions. Nearly 150 years ago, Darwin hypothesized that disgust was a universal emotion that functioned to push away or protect an individual from offensive objects (Darwin, 1872). It has been hypothesized to be an evolved feature of the behavioral immune system (Schaller & Dunkin, 2016), functioning in part to reduce participation in situations that pose infectious disease risks (Tybur, Lieberman & Griskevicius, 2009). Psychologists have extensively investigated the role of disgust in protecting oneself from harmful substances (for a thorough review of these hypotheses see Tybur et al., 2009); however, one area has remained largely understudied—sexual disgust.

Early discussions of disgust include aspects of sexuality (Angyal, 1941; Tomkins, 1963; Tybur et al., 2009). However, the idea of sex as a unique category of disgust was introduced by Haidt, McCauley and Rozin (1994)who argued that components of sexuality are involved in the activation of animal reminder disgust, or an emotion that functions to deter the realization that we are descendants of animals. Haidt et al., 1994 further argued that this emotion is elicited by components of sexuality, but it is also elicited by things like death, hygiene, or body-envelope violations (i.e., skin punctures). Tybur et al. (2009) highlighted why this conceptualization of disgust is problematic: it is unclear why disgust should function to alleviate the reminder of our animal nature, and it remains unclear from an evolutionary perspective why animal reminder disgust would have been selected for if it does not solve any adaptive problems. Lieberman and Patrick (2018) argued that animal reminder disgust, if present, should not be a uniquely human feature. It is equally costly for other animals to mate with genetically similar conspecifics, have bad hygiene, or to die, so the idea that this emotion is a "basic culture-derived human concern" as argued by Rozin and Haidt (2013, p. 367) seems dubious from an evolutionary perspective.

In attempt to reclassify disgust as an emotion that evolved to solve important adaptive problems, evolutionary psychologists have begun to develop a functional framework of this emotion by considering the relevant selection pressures that were recurrently faced over our evolutionary history (Curtis, 2011, Curtis, Aunger, & Rabie, 2004, Curtis, De Barra, & Aunger, 2011; Oaten, Stevenson & Case, 2009; Shook, Oosterhoff, Terrizzi & Clay, 2017; Tybur et al., 2009; Tybur & Lieberman, 2016, Tybur, Lieberman, Kurzban, & DeScioli, 2013). These accounts argue that disgust evolved to solve or ameliorate three distinct adaptive problems: consumption or contact with infectious agents, mating with costly sexual partners, and the violation of social norms. Tybur et al. (2009) specifically hypothesizes that individuals must avoid sex with costly mates and sexual situations that reliably led to

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decrements in reproductive fitness during our evolutionary history. This hypothesis implies that if a potential mate or sexual situation is costly, then sexual disgust will be activated, and avoidance of sex will follow. Tybur et al. (2009)'s Three Domains of Disgust Scale (TDDS) reliably provides evidence that sexual disgust is a discrete component of disgust that has important implications for human mating.

1.1. Problems with current measures of disgust

There exist several measures assessing individual differences in disgust. However, these measures have important limitations. The Sexual Disgust Questionnaire (van Overveld et al., 2013) was developed by modifying a previous measure of disgust (The Disgust Scale; Rozin, Fallon & Mandell, 1984) to include disgust towards sexual stimuli and different sources of contamination. Although this measure (van Overveld et al., 2013) has proved fruitful in understanding disgust as it relates to sexual dysfunction, it includes situations that are quite rare and oddly specific (e.g., "lie beneath bedclothes below which you have masturbated the day before and which show obvious smudges," p. 407) and as a result provides little heuristic value for understanding the adaptive function of this emotion.

The most widely used measure of disgust in evolutionary psychological research is the TDDS (Tybur et al., 2009). This 21-item scale consists of three domains: sexual, pathogen, and moral disgust, with seven items within each domain. This scale was developed by generating a list of items that a relatively small sample (N = 14) of individuals considered disgusting, before reducing and testing the factor structure in a new sample (N = 160). Because these items were derived from a small sample and then reduced to three domains, only one of which involves sexual disgust, it is possible that they do not capture the multidimensionality of sexual disgust. Treating sexual disgust as one-dimensional inadvertently ignores the qualitatively distinct adaptive problems that this emotion presumably evolved to solve. The conceptual space of sexual disgust that has been built consequently relies on the nominations of these 14 people, highlighting the potential to underestimate the complexity of this emotion.

There are a variety of adaptive problems associated with engaging in sex that are excluded by the TDDS. For example, inbreeding avoidance functions to deter individuals from engaging in sexual activities with close genetic relatives: engaging in sex with a genetic relative puts offspring at risk of having a less diverse allele combination, making them more susceptible to infection (Ackerman, Kenrick & Schaller, 2007; Fessler & Navarrete, 2004; Lieberman & Smith, 2012; Lieberman, Fessler, & Smith, 2011; Lieberman, Tooby, & Cosmides, 2003, 2007). All else equal, increased genetic relatedness should be associated with higher sexual disgust, resulting in avoidance of sexual contact. Research confirms that most individuals consider sex between relatives disgusting (Ackerman et al., 2007; Haidt, Bjorklund & Murphy, 2000).

In addition to the multiple problems this emotion is hypothesized to solve, sexual disgust is hypothesized to consist of an underlying information processing system. For example, there are different hypothesized contextual factors that are considered in the activation of sexual disgust including mate availability, physiological state, mate value of oneself and others, genetic relatedness, and sociosexual orientation (for a more detailed description of this information processing structure, see Lieberman & Patrick, 2018, p. 94). For example, if an individual is sexually aroused, then sexual disgust may be down-regulated in favor of conception (Al-Shawaf, Conroy-Beam, Asao & Buss, 2016). Research has provided evidence for this association, showing that sexual disgust has an inhibitory effect on sexual arousal (Andrews, Travis, Cholka, Cooper & Bridges, 2015; Borg & de Jong, 2017, 2012; De Jong, van Overveld & Borg, 2013; Fleischman, Hamilton, Fessler & Meston, 2015; Koukounas & McCabe, 1997; Lee, Ambler & Sagarin, 2014).

The different contextual factors that play into the activation of sexual disgust and the multitude of adaptive problems that individuals must navigate theoretically points to a multi-dimensional structure of sexual disgust; the different adaptive problems that sexual disgust is hypothesized to solve should independently be represented in the activation of this emotion, resulting in a multi-faceted structure of sexual disgust. If sexual disgust represents multiple independent adaptive problems, as we predict, it would be helpful to document and understand nuances in the activation of this emotion.

1.2. The current studies

The goals of the current studies are to (1) examine the multidimensionality of sexual disgust, (2) investigate the relationship of sexual disgust with important individual differences, and (3) develop a novel instrument for assessing an individual's overall level of sexual disgust.

2. Study 1: item generation

We first wanted to generate a more comprehensive inventory of what people consider sexually disgusting. We predicted that individuals would nominate items above and beyond those included on the sexual domain of the Three Domains of Disgust Scale (TDDS; Tybur et al., 2009).

2.1. Methods

2.1.1. Participants

Participants were 105 men and 120 women (N = 225) ranging in age from 18 to 68 years (M = 34.58, SD = 11.50) who were recruited from the university's Psychology undergraduate participant pool and from Amazon's Mechanical Turk. The majority of participants were Caucasian (69.78%) and heterosexual (74.67%). All participants were located within the US and provided informed consent before participation began. All study procedures were IRB approved.

2.1.2. Measures

We modeled our item-generation procedure after the methods described in Tybur et al. (2009) and Meston and Buss (2007). Specifically, we asked individuals to nominate items that they considered sexually disgusting within four different categories: (a) specific things, (b) acts or actions, (c) situations or circumstances, and (d) bodily sensations. We did not define sexual disgust for participants because we were interested in determining what they personally considered sexually disgusting without imposing a definition on their folk-lexical concept. By providing participants with different categories, we aimed to tap into a wider range of nominations. Each participant was asked to nominate at least 10 items per category; we encouraged individuals to nominate as many items as he or she considered sexually disgusting in attempt to capture the full range of sexual disgust.

2.2. Results

Over 2,300 nominations were obtained from this initial procedure. From these initial nominations, items with similar wording or phrasing were combined into single responses and then reduced into a list of the top 50 items (see Appendix for these 50 items). We chose to focus on the top 50 items because after the top 50, the items began to overlap, with only minor differences in wording or phrasing (e.g., "anal sex" versus "having anal sex"). Interestingly, only a few of these top 50 items overlapped with items seen on current measures of sexual disgust, which supports our suggestion that existing scales might not assess the full breadth of sexual disgust.

3. Study 2: the multidimensional structure of sexual disgust and links with individual differences

Item generation in Study 1 provided a more comprehensive

inventory of things that people consider sexually disgusting. Study 2 sought to identify the factor structure of the 50 most frequently nominated items, examine sex differences within the different factors, and to establish construct validity by examining associations between sexual disgust and facets of personality.

3.1. Sexual disgust and individual differences

Individual differences in sexual disgust are important for several reasons. First, because sexual disgust motivates the avoidance of potentially costly sexual situations or mates, understanding which characteristics are associated with an individual's appraisal of costs and benefits will allow us to understand the underlying structure of this emotion. If an individual has heightened levels of sexual disgust, for example, they may miss out on potential mates and important reproductive opportunities. Conversely, if an individual has extremely low levels of sexual disgust, they might face the risk of biological, social, or psychological costs associated with engaging in risky sex. Individual differences in sexual disgust might help explain the stigma surrounding specific mating behaviors such as same-sex interest, incest, and age-discrepant mating. Sexual disgust as measured by the TDDS has been linked to various individual differences including personality, mating strategies, and sex differences (Tybur et al., 2009); however, it is crucial to investigate these links with our measure of sexual disgust to discover important nuances that may be overlooked by unidimensional sexual disgust measures.

3.1.1. Sexual disgust and mating strategy

Research investigating the association between sexual disgust and mating strategy shows that individuals interested in sexual variety tend to have higher thresholds (i.e., lower average ratings) of sexual disgust (Al-Shawaf, Lewis & Buss, 2015, 2018a,b; O'Shea, DeBruine & Jones, 2019; Tybur & Gangestad, 2011), while individuals interested in committed, long-term mating tend to have lower thresholds (i.e., higher average ratings) of sexual disgust. We hypothesized that lower thresholds of sexual disgust function to deter individuals from engaging in potentially risky sexual acts. Higher thresholds for activating this emotion, in contrast, allow individuals to pursue uncommitted sexual acts without being inhibited by the potential ramifications of risky sex. These varying levels of sexual disgust are hypothesized to exist because of different levels of interest in sexual variety (O'Shea et al., 2019). If we want to understand differences in sociosexual orientation between individuals, we must understand the elicitors of sexual disgust. Studying individual differences in sexual disgust is critical in developing an accurate hypothesis for how this emotion has evolved, and what role it plays in human mating.

3.1.2. Sex differences in sexual disgust

Due to asymmetries in the minimum obligatory costs of parental investment (Trivers, 1972), reproductive strategies differ somewhat for males and females. In humans, this asymmetry tends to manifest as differences between men's and women's sexual strategies. On average, men are more inclined towards short-term, uncommitted mating, whereas women are more inclined towards committed, long-term mating. If mating strategies and sexual disgust thresholds are functionally coordinated, we can expect that there will be sex differences in disgust activation. Extant research supports this prediction: sexual disgust thresholds are higher for men, on average, than women (Al-Shawaf et al., 2015; Tybur et al., 2009). Sex differences in levels of sexual disgust are large and robust, ranging from $d = 0.60$ to 1.54 (Al-Shawaf et al., 2018a,b, 2015; Fleischman, 2014; Tybur et al., 2009). Several alternative, but not mutually exclusive, hypotheses have been advanced to explain why this sex difference might exist: the parental investment hypothesis (e.g., infection risks the offspring as well as the mother), the sexually transmitted infections (STI) hypothesis (women are more vulnerable than men to STIs), the rape avoidance hypothesis (women are more often sexually victimized), and the reputational damage hypothesis (short-term mating and being viewed as promiscuous results in a larger status decrement for women than for men). For a thorough explanation of these hypotheses, see Al-Shawaf et al. (2018a,b).

3.1.3. Sexual disgust, religiosity, and political ideology

Individuals who are more socially conservative or religious tend to have lower disgust thresholds (Inbar, Pizarro, Iyer & Haidt, 2012; Olatunji, 2008). This relationship is hypothesized to exist as a function of the behavioral immune system, which motivates individuals to avoid contact with pathogens (Schaller & Duncan, 2016). This is a robust association; however, previous research has focused mostly on pathogen disgust. By measuring the associations between these variables with our measure of sexual disgust, we hope to clarify how conservatism or religious affiliation influences disgust experienced towards specific sexual acts.

3.1.4. Sexual disgust and personality correlates

Levels of sexual disgust could be an important component of manifest differences in personality. If variation in disgust thresholds are associated with manifest differences in sexual behaviors, these differences might be associated with recurrent patterns of thoughts, feelings, and behaviors that are captured in broad descriptive personality dimensions. Some research suggests that sexual disgust is negatively correlated with openness to experience and positively correlated with neuroticism, conscientiousness, and agreeableness (Tybur et al., 2009), but these associations are not well replicated or understood. Because the TDDS only measures sexual disgust broadly, it is necessary to further investigate whether and how specific facets of sexual disgust levels are associated with manifest differences in broad personality dimensions.

3.2. Methods

3.2.1. Participants

Participants were 167 men and 164 women ($N = 331$) ranging in age from 18 to 76 ($M = 36.53$, $SD = 12.87$) who were recruited from both the university's Psychology undergraduate participant pool and from Amazon's Mechanical Turk. The majority of the participants were in a relationship (65.56%), Caucasian (78.55%), and heterosexual (81.57%). All participants were located within the US and provided informed consent before participation began. All study procedures were IRB approved.

3.2.2. Measures

3.2.2.1. Sexual disgust. Levels of sexual disgust were assessed using the 50-items that were generated during Study 1. Participants were presented with the 50 items in standard questionnaire format and were asked to rate how sexually disgusting they considered each item on a 7-point Likert scale. To establish convergent validity, participants were also presented with the TDDS (Tybur et al., 2009) and were asked to rate how disgusting they considered each item on a 6-point Likert scale.

Prediction 1a. Based on the multiple adaptive problems that sexual disgust is hypothesized to solve, we hypothesized that the items developed during Study 1 would be differentially grouped, providing evidence for a multidimensional structure of sexual disgust (see Table 1 for a summary of Study 2 and Study 3's predictions and results).

Prediction 2a. . We hypothesized that there would be positive correlations between the Three Domains of Disgust Scale and our measure of sexual disgust, and that these correlations would be highest for the sexual domain of the TDDS.

3.2.2.2. Mating strategies. The following questions were used to assess

Table 1
Predictions and results for Studies 2 and 3.

	Hypothesis	Predictions	Supported?	Relevant results
Study 2	Sexual disgust should function to solve multiple adaptive problems.	P1a: The items developed during preliminary item generation will be differentially grouped, providing evidence for a multidimensional structure of sexual disgust.	Yes	Exploratory factor analysis (EFA) indicated that a six-factor solution best fit the data, accounting for 63% of the variance after removing items that did not load at 0.50 or higher on a single factor (see Table 2).
	Sexual disgust should function to solve multiple adaptive problems.	P2a: Our measure of sexual disgust should be highly correlated with the Sexual domain of the Three Domains of Disgust scale.	Yes	Our composite measure of sexual disgust was most correlated with the sexual domain of the TDDS (see Table 3).
	Mating strategies should facilitate sexual disgust thresholds.	P3a: Individuals more interested in short-term, uncommitted, mating will have lower levels of sexual disgust.	Yes	Interest in short-term mating was negatively correlated with a composite measure of sexual disgust (see Table 4).
	Men are, on average, more inclined towards short-term, uncommitted mating, whereas women are more inclined towards committed, long-term mating.	P4a: Men will have higher thresholds (i.e. lower ratings) of sexual disgust than women.	Yes	Women had significantly higher levels of sexual disgust than men on 4/6 factors of the SDI (see Table 5).
	Individuals who are more socially conservative or religious tend to be more sensitive to contact with potentially infected sources of contagion.	P5a: Individuals who are a) more religious or b) more conservative will have higher ratings of sexual disgust.	Yes	Individuals with higher levels of religiosity had higher levels of total sexual disgust. Individuals who were more liberal had lower levels of total sexual disgust (see Table 4).
	Sexual disgust regulation should be related to differences within personality. For example, being open to new experiences might allow an individual to engage in acts that are considered less common (i.e., having sex with a person you just met).	P6: Our measure of sexual disgust will be negatively correlated with openness to experience and positively correlated with emotionality, conscientiousness, and agreeableness.	Partially	Our composite score of sexual disgust was negatively associated with openness to experience, positively associated with conscientiousness and not significantly correlated with emotionality or agreeableness (see Table 6).
Study 3	**Hypothesis**	**Predictions**	**Supported?**	**Relevant results**
	Sexual disgust should function to solve multiple adaptive problems.	P1b: The items developed during preliminary item generation will be differentially grouped, providing evidence for a multidimensional structure of sexual disgust.	Yes	Confirmatory factor analysis (CFA) indicated that a six-factor solution structure adequately fit the data (see Fig. 1).
	Sexual disgust should function to solve multiple adaptive problems.	P2b: Our measure of sexual disgust should be highly correlated with the Sexual domain of the Three Domains of Disgust scale.	Yes	Our composite measure of sexual disgust was most correlated with the sexual domain of the TDDS (see Table 3).
	Mating strategies should facilitate sexual disgust thresholds.	P3b: Individuals more interested in short-term, uncommitted, mating will have lower levels of sexual disgust.	No	Interest in short-term mating was not significantly correlated with a composite measure of sexual disgust; however, several of the factors still had significant associations with interest in short-term mating (see Table 4).
	Men are, on average, more inclined towards short-term, uncommitted mating, whereas women are more inclined towards committed, long-term mating.	P4b: Men will have higher thresholds (i.e. lower ratings) of sexual disgust than women.	Yes	Women had significantly higher levels of sexual disgust than men on the "Promiscuity" factor of the SDI (see Table 5).
	Individuals who are more socially conservative or religious tend to be more sensitive to contact with potentially infected sources of contagion.	P5b: Individuals who are a) more religious or b) more conservative will have higher ratings of sexual disgust.	Yes	Individuals with higher levels of religiosity had higher levels of total sexual disgust. Individuals who were more liberal had lower levels of total sexual disgust (see Table 4).
	Individuals with negative attitudes towards homosexuals should view these acts as sexually disgusting.	P7: We hypothesized that the IAH would correlate positively with the "Same-sex attraction" factor of the Sexual Disgust Inventory. We had no hypothesis about the relationship of the IAH with the other factors of the SDI; these analyses were exploratory.	Yes	Individuals who had higher, less-positive, attitudes towards homosexuals also experienced significantly more sexual disgust towards items on the "Same-sex" factor of the SDI (see Table 3).

Table 2
Study 2 final items and factor loadings.

Items	Factors					
	Taboo	BDSM	Oral sex	Same-sex attraction	Promiscuity	Hygiene
Having sex with your child	0.87					
Having sex with a dead person	0.85					
Sex with animals	0.79					
Rape	0.75					
Pornography involving children	0.74					
Having sex with your sibling	0.69					
Sexual pleasure through use of human feces	0.62					
Vomiting during sex	0.60					
Having sex with your parent	0.58					
Having sex with someone who is underage	0.57					
Whipping someone during sex		0.87				
Inflicting pain on someone during sex		0.78				
Bondage on a woman		0.78				
Choking someone during sex		0.78				
Domination or submission during sex		0.72				
Bondage on a man		0.66				
Spanking someone during sex		0.59				
A man performing oral sex on a woman			0.92			
Simultaneous oral sex ("69″)			0.89			
A woman performing oral sex on a man			0.89			
Licking someone during sex			0.71			
Male homosexuality				1.01		
Sex between two men				1.00		
Female homosexuality				0.60		
Sex between two women				0.51		
Group sex or orgies					0.83	
Agreement between partners to have sex with people outside of the committed relationship ("swinging")					0.77	
Threesomes or sex involving three people					0.77	
Watching pornography					0.50	
Having sex with someone who has unpleasant body odor						0.91
Having sex with someone who has bad breath						0.78

interest in sexual variety: "Please rate the following items on a scale from 1 (not at all currently interested in) to 7 (strongly currently interested in): The degree to which you are currently interested in short-term mateships (e.g., casual sex, one-night stands, brief affairs); The degree to which you are currently interested in a long-term committed mateship (e.g., a committed romantic relationship or marriage)". We also assessed whether participants were in a current committed relationship.

Prediction 3a. We predicted we would replicate previous research (Al-Shawaf et al., 2015; O'Shea et al., 2019') showing that individuals more interested in short-term, uncommitted, mating would have lower levels of sexual disgust.

Prediction 4a. We predicted we would replicate previous research showing that men have higher thresholds (i.e. lower ratings) of sexual disgust (Al-Shawaf et al., 2015; O'Shea et al., 2019') than women.

3.2.2.3. Religiosity and political ideology. We examined the relationship between religiosity and sexual disgust, as well as political ideology with sexual disgust. Religiosity was assessed by asking: "How religious are you? Not at all religious (1), 2, 3, average (4), 5, 6, extremely religious (7)," while political orientation was assessed by asking "What is your political orientation? Extremely conservative (1), 2, 3, moderate (4), 5, 6, Extremely liberal (7)".

Prediction 5a. We predicted that individuals who considered themselves as: (a) more religious or (b) more conservative would have higher ratings of sexual disgust.

3.2.2.4. Personality. We assessed facets of personality with the Brief HEXACO Inventory (BHI).

The BHI is a 24-item short-form developed by de Vries (2013) that assesses the six personality dimensions of the HEXACO model: Honesty-Humility (H), Emotionality (E), Extraversion (X), Agreeableness (A), Conscientiousness (C), and Openness to Experience (O) (Ashton & Lee, 2009). We chose to include the HEXACO model instead of other models of personality because of its unique Honesty-Humility dimension. We chose to use the BHI because of its ability to capture the HEXACO personality dimensions in an efficient manner.

Prediction 6. We predicted that our measure of sexual disgust would be negatively correlated with openness to experience and positively correlated with emotionality, conscientiousness, and agreeableness (Tybur et al., 2009). We had no hypotheses for the other dimensions of the HEXACO; our subsequent analyses were exploratory.

We included other measures in this study as part of a larger project; they are not reported here. Examples include measures of the dark triad, morality, sexual compulsivity, relationship satisfaction, and sexual functioning.

3.3. Results

3.3.1. Factor analysis

We conducted an exploratory factor analysis (EFA) using promax rotation on the ratings of the 50 items generated by the act nomination procedure. Both parallel analysis and a scree plot indicated a six-factor solution. To ensure that the six-factor solution best fit the data, we examined four, five, and six factor solutions. A factor solution of six proved optimal, accounting for 63% of the variance after removing items that did not load at 0.50 or higher on a single factor. We chose to use 0.50 as a cutoff threshold because we wanted to ensure that the items were highly consistent with the individual factors, and because we wanted to reduce the scale down to as few items as possible while still ensuring the adequacy of the individual factors (see Hair, Anderson, Tatham and Black (1998) for discussion of cutoff thresholds). We retained one item (sex between two women) that

Table 3
Convergent validity for Studies 2 and 3.

	Factors						
	Taboo	BDSM	Oral sex	Same-sex attraction	Promiscuity	Hygiene	Total sexual disgust
Study 2							
The Three Domains of Disgust Scale							
Sexual Domain	.07	.56***	.58***	.44***	.76***	.41***	.72***
Pathogen Domain	.32***	.24***	.12*	.21***	.29***	.54***	.45***
Moral Domain	.19***	.15**	.08	.07	.21***	.20***	.20***
Study 3							
The Three Domains of Disgust Scale							
Sexual Domain	.25***	.63***	.64***	.54***	.74***	.30***	.70***
Pathogen Domain	.12*	.24***	.11	.27***	.26***	.46***	.36***
Moral Domain	−.01	.34***	.18**	.22***	.33***	.20***	.33***
Index of Attitudes towards Homosexuals total score	−.17**	.38***	.34***	.66***	.43***	.21***	.51***

*$p < .05$.
**$p < .01$.
***$p < .001$.
Total sexual disgust represents a composite score of sexual disgust, created by taking the mean of all of the item responses for each participant.

loaded at 0.48 at an initial step of the factor analysis, because it fit extremely well with the other items within the "Same-sex attraction" factor. Our final factor solution indicated that all items loaded at above 0.50 on one of the six factors (See Table 2 for final items and factor loadings). We chose to drop several items that were factor inconsistent (having sex in public, a man performing oral sex on a man, and female ejaculation or squirting). This resulted in 31/50 items and six factors being retained after the exploratory analysis. We labeled these six factors of sexual disgust according to the content of the items that loaded on them: Taboo ($\alpha = 0.90$), BDSM ($\alpha = 0.92$), Oral sex ($\alpha = 0.90$), Same-sex attraction ($\alpha = 0.92$), Promiscuity ($\alpha = 0.89$), and Hygiene ($\alpha = 0.84$). The full list of items grouped according to their factor are shown in Table 2.

3.3.2. Convergent validity

Table 3 presents the results for the convergent validity of both studies. Large, significant correlations between our measure of sexual disgust and the sexual domain of the TDDS support the validity of our scale. The highest correlation was between the "Promiscuity" factor of the Sexual Disgust Inventory and the sexual domain of the TDDS ($r = 0.76$, $p < .001$).

3.3.3. Individual differences in sexual disgust

3.3.3.1. Sexual disgust and mating strategy. Table 4 presents within-factor correlations, and correlations between sexual disgust, mating strategies, religiosity, and political ideology for Studies 1 and 2. Interest in a short-term mating strategy was negatively correlated with sexual disgust: this effect was largest for the "Taboo" factor ($r = -0.29$, $p < .001$). Interest in long-term mating was negatively related to sexual disgust: this effect was largest for disgust towards "Oral sex" ($r = -0.20$, $p < .001$), such that individuals more interested in long-term mating were less disgusted by acts of oral sex.

3.3.3.2. Sex differences. Sex differences in interest in short or long-term mating strategies corroborate previous research showing that women, on average, are less interested in short-term mating than men (see Table 5). Sex differences in sexual disgust ratings were consistent with previous patterns found by Al-Shawaf et al. (2015) and Tybur et al. (2009). As predicted, women scored significantly higher than men on the global sexual disgust score, as well as four of the six factors (see Table 5). The sex difference was largest for the "Promiscuity" factor (Cohen's $d = 0.52$, $p < .001$).

3.3.3.3. Sexual disgust, religiosity, and political ideology. Higher religiosity was positively correlated with sexual disgust, an effect largest for the "Promiscuity" factor ($r = 0.49$, $p < .001$; see Table 4). Sexual disgust was negatively correlated with political ideology, such that, more liberal individuals were less sexually disgusted; this effect was largest towards "Same-sex attraction" ($r = -0.40$, $p < .001$).

3.3.3.4. HEXACO Traits. Significant correlations between our factors of sexual disgust with the facets of the HEXACO provide evidence that sexual disgust is linked with major personality traits. The largest correlations were between openness to experience and the "Oral sex" and "Same-sex attraction" factors ($r = -0.28$, $p < .001$ for both; see Table 6).

3.4. Discussion

The results of Study 2 support our primary hypothesis that sexual disgust is not a unitary emotion: exploratory factor analysis revealed six dimensions of sexual disgust. We found sex differences in sexual disgust which comports with previous research and theory, and establishes preliminary evidence of the convergent validity of the SDI. We also provided evidence that some facets of personality and sexual disgust are reliably correlated, which highlights the potential predictive validity of our multidimensional measure of sexual disgust.

4. Study 3

Study 3 sought to examine the robustness and replicability of the factor structure found in Study 2 and further examine individual differences in sexual disgust.

4.1. Methods

4.1.1. Participants

Participants were 182 men and 136 women ($N = 318$) ranging in age from 18 to 76 ($M = 36.35$; $SD = 11.11$) who were recruited from both the university's undergraduate participant pool and Amazon's Mechanical Turk. The majority of the participants were in a relationship (71.38%), Caucasian (72.01%), and heterosexual (87.42%). All participants were located within the US and provided informed consent before participation began. All study procedures were IRB approved.

4.1.2. Measures

Sexual disgust, mating strategies, political ideology, and religiosity were assessed using the same methods that were employed in Study 2. Our hypotheses about the relationships of these variables with sexual disgust were the same as they were in Study 2 (see Predictions 1a, 2a,

Table 4
Within-factor and individual differences correlations for Studies 2 and 3.

		1	2	3	4	5	6	7	8	9	10	11
	1. Taboo	-										
	2. BDSM	.04	-									
	3. Oral sex	-.29***	.53***	-								
	4. Same-sex attraction	-.05	.56***	.50***	-							
	5. Promiscuity	.05	.68***	.54***	.57***	-						
Study 2 correlations	6. Hygiene	.27***	.39***	.24***	.34***	.39***	-					
	7. Total Sexual disgust	.18**	.82***	.66***	.77***	.84***	.65***	-				
	8. Short-term mating	-.29***	-.15**	.06	-.04	-.23***	-.10	-.16**	-			
	9. Long-term mating	.19***	-.11	-.20***	-.09	.02	-.03	-.06	-.35***	-		
	10. Political ideology	.00	-.26***	-.21***	-.40***	-.25***	-.09	-.33***	.12*	-.09	-	
	11. Religiosity	-.05	.40***	.31***	.48***	.49***	.16**	.49***	-.08	.00	-.34***	-
	1. Taboo	-										
	2. BDSM	-.01	-									
	3. Oral sex	-.44***	.59***	-								
	4. Same-sex attraction	-.10	.62***	.56***	-							
	5. Promiscuity	-.09	.76***	.61***	.71***	-						
Study 3 correlations	6. Hygiene	.29***	.35***	.11*	.30***	.30***	-					
	7. Total Sexual disgust	.06	.86***	.68***	.83***	.88***	.56***	-				
	8. Short-term mating	-.35***	.04	.22***	.09	-.05	.04	.01	-			
	9. Long-term mating	.27***	-.05	-.17**	-.02	.02	.11	.02	-.31***	-		
	10. Political ideology	-.05	-.23***	-.08	-.35***	-.29***	-.13*	-.30***	.09	-.04	-	
	11. Religiosity	-.22***	.41***	.35***	.49***	.46***	.14*	.45***	.11	.08	-.31***	-

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

3a, 4a, and 5a; see Table 1 for a summary).

4.1.2.1. Attitudes towards homosexuals.. Attitudes towards homosexuals were assessed using a shortened version of the Index of Attitudes towards Homosexuals (IAH**)** as suggested by Siebert, Chonody, Rutledge and Killian (2009). We chose to include this measure to further establish convergent validity of the same-sex attraction factor of the Sexual Disgust Inventory. Rather than using the two subscales of the IAH, we created a global score by summing all items and then correlating them with the six factors of the Sexual Disgust Inventory.
***Prediction 7.*.** We hypothesized that the IAH would correlate positively with the "Same-sex attraction" factor of the Sexual Disgust Inventory. We had no hypothesis about the relationship of the IAH with the other factors of the SDI; these analyses were exploratory.

4.2. Results

4.2.1. Factor analysis

We ran a multiple group confirmatory factor analysis (CFA) in Mplus (Muthen & Muthen, 2017) to test the six-factor structure that was found in Study 2. Prior to running the factor analysis, we checked each factor for normality. There were ceiling and floor effects among the six factors. We used weighted least squares means and variance adjusted (WLSMV) estimation to account for this violation of normality. The CFA indicated that a six-factor structure adequately fit the data, χ^2 (1012, N = 318) = 1982.333, $p < .01$, *CFI* = 0.967, *RMSEA* = 0.078 (see Fig. 1 for the final model and factor loadings).

4.2.2. Sex differences

Table 5 presents the sex-specific means and standard deviations for the six factors of sexual disgust (Cronbach's α: Taboo = 0.93; BDSM = 0.91; Oral sex = 0.92; Same-sex Attraction = 0.91; Promiscuity = 0.88; Hygiene = 0.78). We did not replicate all of the sex differences that were found in Study 2. Women had significantly higher disgust on the "Promiscuity" factor (Cohen's d = 0.26, p = .02), as found in Study 1, but not on overall levels of sexual disgust (Cohen's d = 0.04, p = .77).

4.2.3. Sexual disgust and mating strategy

Short-term mating strategy was negatively related to sexual disgust, although this effect was only significant for the "Taboo" factor ($r = -0.35$, $p < .001$; see Table 4). Interest in a long-term mating strategy was significantly correlated with sexual disgust, an effect strongest for the "Taboo" factor (r = 0.27, $p < .001$).

4.2.4. Sexual disgust, religiosity, and political ideology

Both religiosity and political ideology were significantly correlated with sexual disgust; this effect was largest for the "Same-sex attraction" factor (r = 0.49, $p < .001$; $r = -0.35$, $p < .001$, respectively; see Table 4).

4.2.5. Convergent validity

Convergent validity of the final model was established with correlations between the TDDS, our six-factor measure of sexual disgust, and the IAH (see Table 3). The IAH was significantly correlated with all factors of the SDI, but as predicted, the strongest correlation was found among the "Same-sex attraction" factor of the SDI, which supports the convergent and discriminant validity respectively (see Table 3). Sexual disgust as measured by our scale was again most correlated with the sexual domain of the TDDS, providing further evidence of construct validity. The highest correlation was again between the "Promiscuity" factor of the Sexual Disgust Inventory and the sexual domain of the TDDS (r = 0.74, $p < .001$).

4.3. Discussion

Study 3 confirmed the six-factor structure of sexual disgust that was identified in Study 2. Moreover, it established additional convergent validity with positive correlations between our measure of sexual disgust (SDI), another measure of sexual disgust (TDDS), and attitudes towards homosexuality (IAH).

5. General discussion

Sexual disgust is an understudied emotion of great importance from an evolutionary perspective. Previous research suggests there is interesting individual variation in the activation of this emotion. To

Table 5
Descriptive statistics and sex differences mean (SD) for Studies 2 and 3.

	Men	Women	Cohen's *d*
Study 2			
Taboo	6.32 (1.12)	6.63 (0.68)	0.33**
Incest	6.67 (0.91)	6.34 (1.28)	0.30**
Unusual sex acts	6.61 (0.65)	6.32 (1.13)	0.31**
BDSM	3.05 (1.64)	3.32 (1.82)	0.16
Oral sex	1.59 (1.12)	1.93 (1.40)	0.27*
Same-sex attraction	2.76 (1.74)	2.61 (2.06)	0.08
Same-sex between women	1.97 (1.61)	2.50 (2.09)	0.28*
Same-sex between men	3.53 (2.30)	2.75 (2.18)	0.35**
Promiscuity	2.65 (1.61)	3.58 (1.93)	0.52***
Hygiene	4.11 (1.68)	4.64 (1.65)	0.32**
Total sexual disgust	3.42 (0.95)	3.79 (1.19)	0.34**
Short-term mating	3.09 (2.07)	2.16 (1.72)	0.49***
Long-term mating	5.53 (1.77)	5.92 (1.69)	0.23*
Study 3			
Taboo	6.18 (1.16)	6.32 (1.19)	0.12
Incest	6.22 (1.31)	6.34 (1.31)	0.09
Unusual sex acts	6.16 (1.19)	6.30 (1.18)	0.12
BDSM	3.29 (1.69)	3.30 (1.76)	0.01
Oral sex	2.30 (1.75)	2.17 (1.60)	0.08
Same-sex attraction	3.17 (1.93)	2.85 (2.10)	0.16
Same-sex between women	2.34 (1.75)	2.18 (1.67)	0.09
Same-sex between men	2.25 (1.83)	2.16 (1.66)	0.05
Promiscuity	3.04 (1.84)	3.52 (1.89)	0.26*
Hygiene	4.70 (1.49)	4.75 (1.50)	0.03
Total sexual disgust	3.78 (1.15)	3.82 (1.13)	0.04
Short-term mating	3.55 (2.10)	2.33 (1.96)	0.60***
Long-term mating	5.44 (1.69)	5.88 (1.58)	0.27*

Note. Because items on the same-sex attraction factor are described according to sex (sex between two men; sex between two women; male homosexuality; female homosexuality), the lack of a sex difference could be due to the cancelation of men and women's responses. We parceled these items together by sex (male and female, respectively) to further test for sex differences in sexual disgust regarding same-sex attraction. When splitting the items, the Cohen's *d* values go up substantially. We decided to split the Taboo factor into two subfactors based on conceptual similarity: the "``Incest" factor (sex with your child; sex with your parent; sex with your sibling) and the "``Unusual sex acts" factor (having sex with a dead person; sex with animals; rape; pornography involving children; sexual pleasure through use of human feces; vomiting during sex; having sex with someone who is underage). We recommend researchers interested in studying incest or unusual sex use the subfactors, otherwise, the total factor should be used.
*$p < .05$.
**$p < .01$.
***$p < .001$.

understand how individual variation in sexual disgust sensitivity can persist under the winnowing forces of sexual selection, we must consider the role of context and personality dimensions in the conceptualization of sexual disgust. The primary focus of the studies presented in this paper was to address the limitations of current measures of sexual disgust, while systematically creating and testing a novel instrument for use in future studies.

5.1. Limitations and future directions

The studies presented in this paper have several limitations that should be considered. First, although our studies attempted to broaden the age range and demographic distribution of the participants, selection issues common in psychological research might still be at play. Recruiting individuals from the university's subject pool is a common, inexpensive way to increase sample size; however, this often results in a young, liberal sample. The use of Amazon's Mechanical Turk helps mitigate this issue, but only participants living in the US with internet access could participate. Participants were demographically similar across the three studies in terms of ethnicity, age, and sexual orientation. However, there was variation between each study, which may account for differences in results between Studies 2 and 3. We did not collect data on the political orientation of individuals in Study 1. It is possible that the individuals who participated in this nomination procedure are not representative of politically diverse populations that exist outside of western, economic, industrialized, rich, and democratic samples (WEIRD; Henrich, Heine & Norenzayan, 2010). Cross-cultural research is needed to address these issues.

It is also possible that the items generated in Study 1 do not map exactly onto a functional analysis of sexual disgust during human evolutionary history, but rather are a better representation of items that individuals find disgusting within the modern environment. For example, our measure does not include items about mating with an unattractive person or someone with cues indicative of disease such as open lesions, sores, or STIs. These problems, among others not included on our measure, were presumably important deterrents during the EEA. Future research could examine if inclusion of such items alters the latent structure of sexual disgust.

We find it surprising that most of the sex differences that were found in Study 2 did not replicate in Study 3, except for a significant sex difference on the "Promiscuity" factor. The other factors of the SDI should also be relevant for women and men's mating strategies and should be differentially activated according to the adaptive problem being represented. This should be especially true for items regarding incest and rape. We believe this might be because of our sample (majority of which was obtained through Amazon's Mechanical Turk) and may not represent the true nature of sex differences in this emotion or on this measure. Additional research is needed to test the robustness of sex differences in sexual disgust across factors.

Although the studies presented in this paper provide evidence in support of previous research relating sexual disgust to various personality dimensions, we cannot reasonably establish the direction of causality between these variables. It is not clear, for example, whether conservative worldviews cause higher levels of sexual disgust or, alternatively, whether higher levels of sexual disgust lead people to

Table 6
Sexual disgust and personality for Study 2.

	Factors						
The Brief HEXACO Inventory	Taboo	BDSM	Oral sex	Same-sex attraction	Promiscuity	Hygiene	Total sexual disgust
Honesty	.27***	.07	−.12*	−.07	.08	.06	.05
Emotionality	.05	.05	.12*	−.10	.06	−.03	.01
eXtraversion	.12*	.01	−.19***	−.02	−.03	.08	−.01
Agreeableness	.00	.07	.05	.05	.11*	−.03	.09
Conscientiousness	.17**	.09	−.06	.02	.08	.14**	.11*
Openness	.17**	−.23***	−.28***	−.28***	−.20***	−.13*	−.26***

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

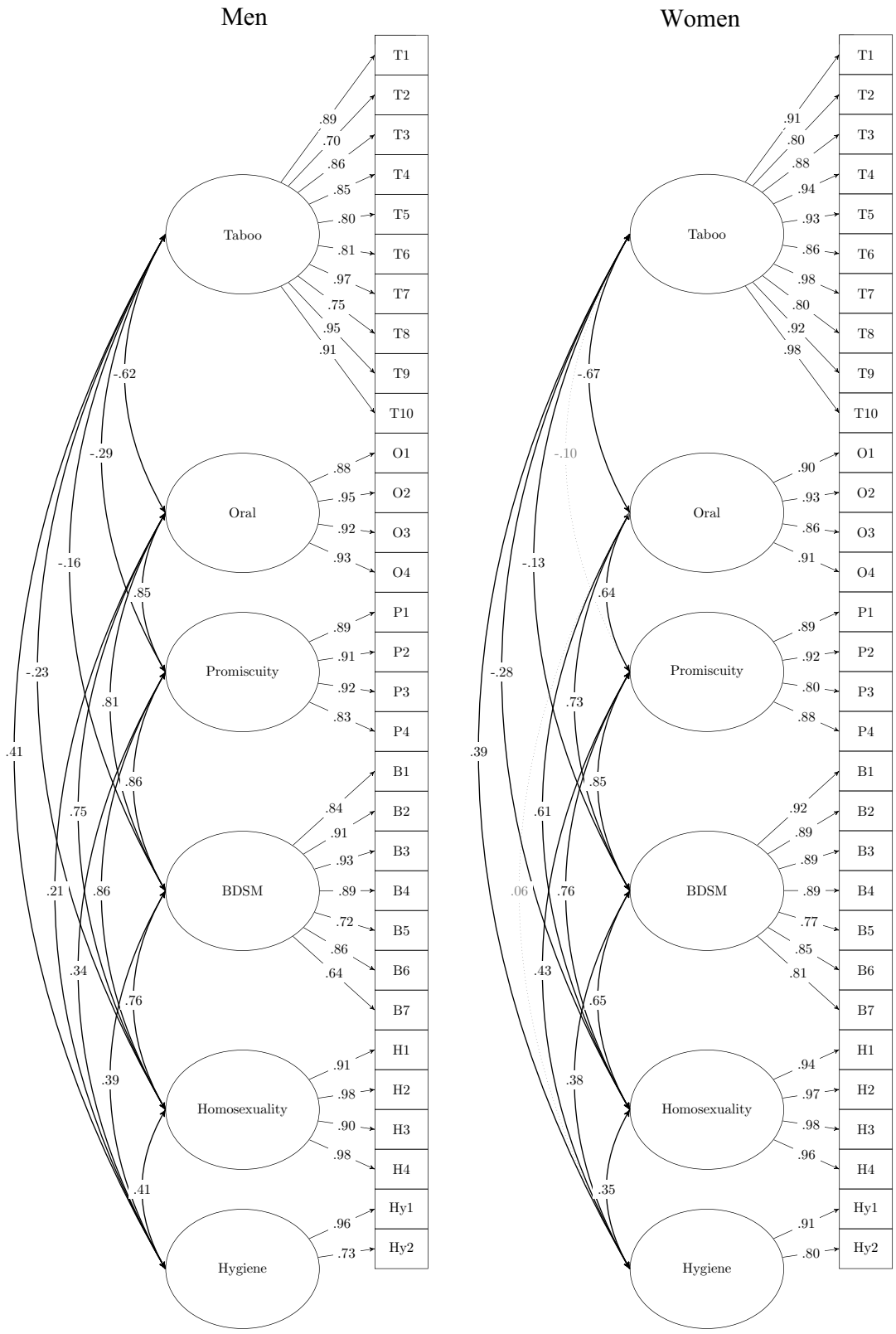

Fig. 1. Depiction of the multiple group confirmatory factor analysis of a six-factor solution of sexual disgust as separated by men and women for Study 3. The CFA indicated that a six-factor structure adequately fit the data, χ^2 (1012, N = 318) = 1982.333, $p < .01$, *CFI* = 0.967, *RMSEA* = 0.078.

support conservative worldviews that stigmatize sexual acts. Some links between sexual disgust and other individual difference variables may be the result of sexual disgust thresholds creating patterns of thoughts, feelings, and behavior. Other links may result from pre-existing personal characteristics—such as immune functioning, relationship status, or formidability—involved in the calibration of sexual disgust across development. Future research should work to disentangle the causality of these relationships.

5.2. Hypothesized functions of the six factors of sexual disgust

Studies 2 and 3 determined a six-factor organization of sexual disgust. These six dimensions of sexual disgust may map on to solutions to six partially distinct adaptive problems. Understanding the proper domain of each facet is of critical importance in predicting and interpreting individual differences. We have hypothesized the adaptive function of each factor below. Future research will need to examine whether the six dimensions of sexual disgust reflect unique adaptations that evolved in response to different adaptive problems.

5.2.1. Taboo

Engaging in the activities under the "Taboo" factor pose various social and biological costs. Several of the items within the "Taboo" factor are considered illegal or unusual across cultures (e.g., rape, sex with children, sex with animals, sex with the use of human feces) while others refer to sex with close genetic relatives. Both categories of behaviors are often moralized and deemed unacceptable by the majority of people. Engaging in sexual acts deemed unacceptable by one's social group poses a serious adaptive problem: being socially ostracized. Experiencing sexual disgust towards these activities might aid in avoiding behaviors that can lead to social devaluation, alongside prospective shame (Sznycer et al., 2016). Further, engaging in sex with genetic relatives can lead to deleterious phenotypic effects in offspring. Sexual disgust should prevent participation in these acts and promote negative moralization of individuals who engage in these acts.

5.2.2. BDSM

Items that constitute the "BDSM" factor involve activities that are potentially violent or dangerous. Although these items have become less stigmatized over time (Weiss, 2006) they are still considered less typical sexual activities. It is possible that these items are sexually disgusting because these activities are triggering our evolved psychology of punishment or harm avoidance, or because several of the items represent behaviors commonly used in sexual coercion. Even though these activities can be completely safe, sexual disgust may function to reduce participation, thereby decreasing the potential risks associated with harm.

5.2.3. Same-sex attraction

The "Same-sex attraction" factor may have arisen due to the way that "disgust interacts with the 'moral' system" (Lieberman & Patrick, 2018, pg. 134). Individuals engaging in sexual activities with the same-sex have a low expected sexual value for heterosexual individuals, and are considered a "minority group". In our ancestral environment, sexual disgust might have functioned to cognitively label these individuals to eliminate the costs associated with channeling resources or time into attempting to mate with such individuals.

Another reason this factor may have emerged centers around the mental association between short-term mating orientation, promiscuity, and homosexuality (Pinsof and Haselton, 2017, Pinsof & Haselton, 2016). We found no evidence to support the idea that short-term mating orientation is associated with levels of disgust on the "Same-sex attraction" factor in these studies. However, we did find that disgust towards the "Promiscuity" factor was positively, highly correlated with disgust towards "Same-sex attraction" in Studies 2 and 3. Future research should work to disentangle potential reasons that this factor emerged.

5.2.4. Promiscuity

The items that constitute the "Promiscuity" factor represent interest in sexual variety. By engaging in acts of uncommitted, promiscuous mating, individuals are at risk of having sex with someone whom will not continue to be a future sexual partner, signaling themselves as an unreliable, uncommitted mate to those in the surrounding environment, or contracting sexually transmitted infections with increased exposure to sexual partners and activities.

While individuals interested in sexual variety might not consider the items on this factor overtly sexually disgusting, a potential mate who engages in these behaviors could be costly as a long-term mate. The replicable sex difference in levels of disgust experienced by men and women on this factor may reflect women's desire for committed, long-term mating as well as the costs women historically incurred from short-term mating (Buss, 2016; Symons, 1979). Sexual disgust on this factor should therefore function to deter individuals from facing the potential social and health risks that are faced when one engages in promiscuous sex (e.g., reputational damage; contracting a sexually transmitted disease) and aid in mate selection. Future research should examine the extent to which disgust towards "Promiscuity" is associated with sexual regret.

5.2.5. Oral sex

The function of the "Oral sex" factor of the SDI is hypothesized to deter participation in sexual activities that could lead to increased rates of transmission of harmful pathogens or diseases, tapping into our evolved psychology of disease avoidance. Genitals harbor bacteria that can be dangerous when transmitted to other areas, either orally or through penile-vaginal penetration (American Sexual Health Association, 2016; Schneede, Tenke & Hofstetter, 2003). Being disgusted by cues to increased risk of disease or pathogen transmission by genital to mouth contact might function to protect individuals from contracting these diseases.

Disgust towards "Oral sex" is different from disgust towards the "Promiscuity" factor in several important ways. While it is certainly true that engaging in promiscuous sex promotes higher disease risk, there are a variety of other adaptive challenges that are also closely associated with promiscuity, such as reputational damage and ensuring investment. This is less true for "Oral sex," because oral sex consists of this unique, adaptive problem involving potential disease transmission from intimate genital to mouth contact. Interestingly, the items that constitute this factor involve acts of performing oral sex, not receiving. It remains unclear why this asymmetry exists. Future research should examine predictors of variation in this facet of sexual disgust.

5.2.6. Hygiene

The extraction of a factor about "Hygiene" is not surprising from an evolutionary perspective,; but it is particularly interesting because it provides evidence that within sexual disgust, elements of pathogen avoidance are critical. Similar to the "Oral sex" factor, disgust towards these items likely taps into our evolved psychology of disease avoidance. Avoiding contact with contaminated vectors is of utmost importance within sexual contexts. Any attempt to decrease exposure to the pathogens involved in sexual activities would have been advantageous. Further, bad hygiene might have been a reliable cue to increased levels of pathogen load during our evolutionary history. Our psychology should function to deter engaging in sexual activities that would expose us to harmful diseases or vectors. Sex is already a risky activity to engage in. If one is disgusted by cues to pathogens, then the presence of bad breath or bad hygiene should further increase disgust, inhibiting participation in sexual activities.

Future research should disentangle the adaptive function of each factor of the SDI. If our speculations are correct, then these factors could be linked to variation in legal rules or systems, parasite prevalence, sexual strategies, sexual dysfunction, sexual coercion, or childhood co-residence.. While the problems associated with the factors of the SDI should be consistent cross-culturally, varying levels of context-specific input might result in cross-cultural differences in sexual disgust activation. Ecologies vary in parasite prevalence, for example, which may evoke cultural differences in sexual disgust thresholds. Mating pools vary in operational sex ratio, which may downregulate "Promiscuity" disgust when there is a surplus of women, which activates more frequent short-term mating. Cross-cultural research can test

these hypotheses, as well as examine the universality and cultural specificity of the six factors of sexual disgust discovered in the current studies.

6. Conclusions

The conceptualization of disgust as a functional emotion has gained popularity over the past few decades. Although previous scales have been important milestones in establishing an understanding of disgust from an evolutionary perspective, we argue that our understanding of sexual disgust has remained largely incomplete. Because of the importance of reproductive success in natural and sexual selection, identifying mechanisms responsible for individual variation in sexual disgust sensitivity is necessary for developing a functional framework for this emotion. The discovery of six factors of sexual disgust in these studies illustrates the multidimensionality of the construct that is overlooked by existing scales. These results corroborate research showing individual variation in sexual disgust and highlight additional nuances that need to be incorporated into future research. We propose that the Sexual Disgust Inventory—a scale for assessing the multidimensionality of sexual disgust—can play a crucial role in the further development of the theoretical framework on sexual disgust.

Declarations of Competing Interest

None.

Appendix

Top 50 Nominated Items From Study 1

1 Anal sex
2 Sex with animals
3 Peeing on someone during sex
4 Having sex with someone who is underage
5 Sexual pleasure through use of human feces
6 Rape
7 A man performing oral sex on a man
8 A man performing oral sex on a woman
9 A woman performing oral sex on a man
10 A woman performing oral sex on a woman
11 Group sex or orgies
12 Bondage on a man
13 Bondage on a woman
14 Inserting a hand into the vagina or rectum
15 Having sex with your sibling
16 Having sex with your parent
17 Having sex with your child
18 Having sex with your step-sibling
19 Oral-anal contact
20 Sex between two men
21 Having sex with someone who has unpleasant body odor
22 Having sex in public
23 Threesomes or sex involving three people
24 Vomiting during sex
25 Domination or submission during sex
26 Spanking someone during sex
27 Farting during sex
28 Choking someone during sex
29 Having sex with someone who has bad breath
30 Having sex with a dead person
31 Watching pornography
32 Semen or cum
33 Sucking someone's toes during sex
34 Having sex with someone who is sweaty
35 Cutting someone during sex
36 Deep-throating or gagging during oral sex
37 Licking someone during sex
38 Spitting on someone during sex
39 Sex during a woman's menstrual period
40 Pornography involving children
41 Sex between two women
42 Passing cum from mouth to mouth
43 Whipping someone during sex
44 Simultaneous oral sex ("69″)
45 Male homosexuality
46 Female homosexuality
47 Inflicting pain on someone during sex
48 Female ejaculation or squirting

49 Swallowing ejaculate
50 Agreement between partners to have sex with people outside of the committed relationship ("swinging")

The Sexual Disgust Inventory

INSTRUCTIONS: The following items describe a variety of sex acts. Please use the scale below to rate how *sexually disgusting* you find the items. Some items you might consider extremely sexually disgusting; others you might consider not sexually disgusting at all. There are no right or wrong answers.

Not at all sexually disgusting			Moderately sexually disgusting			Extremely sexually disgusting
1	2	3	4	5	6	7

1 Sex with animals
2 Whipping someone during sex
3 Simultaneous oral sex ("69″)
4 Sex between two women
5 Threesomes or sex involving three people
6 Having sex with someone who has unpleasant body odor
7 Having sex with someone who is underage
8 Inflicting pain on someone during sex
9 A man performing oral sex on a woman
10 Male homosexuality
11 Watching pornography
12 Having sex with someone who has bad breath
13 Sexual pleasure through use of human feces
14 Bondage on a man
15 A woman performing oral sex on a man
16 Female homosexuality
17 Agreement between partners to have sex with people outside of the committed relationship ("swinging")
18 Rape
19 Bondage on a woman
20 Licking someone during sex
21 Group sex or orgies
22 Having sex with your sibling
23 Domination or submission during sex
24 Sex between two men
25 Having sex with your parent
26 Having sex with a dead person
27 Spanking someone during sex
28 Vomiting during sex
29 Having sex with your child
30 Choking someone during sex
31 Pornography involving children

To score the scale, create the average score for each of the following factors.
Taboo: items 1, 7, 13, 18, 22, 25, 26, 28, 29, 31
Incest subfactor: 22, 25, 29
Unusual sex subfactor: 1, 7, 13, 18, 26, 28, 31
Oral sex: items 3, 9, 15, 20
BDSM: items 2, 8, 14, 19, 23, 27, 30
Hygiene: items 6, 12
Same-sex attraction: items 4, 10, 16, 24
Promiscuity: items 5, 11, 17, 21

Sexual disgust composite score: Average of the above six factors

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