

**Self-Ownership and Disgust:  
Why Compulsory Body Part Redistribution Gets Under Our Skin**

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Recent years have seen a renewed interest in the idea of self-ownership.<sup>1</sup> The self-ownership thesis asserts, roughly, that agents own their minds and bodies in the same way that they can own extra-personal property. Just as property owners can control, protect, and transfer rights over their property, self-owning agents can control, protect, and transfer rights over themselves.

One common strategy for defending the self-ownership thesis is to show that it accords with our intuitions about the wrongness of various acts involving the expropriation of body parts. Some of contemporary moral and political philosophy's most celebrated thought experiments, such as Robert Nozick's case of compulsory eyeball redistribution and Judith Jarvis Thomson's *Violinist*, purport to substantiate individuals' rights to control what happens in and to their bodies in this way.

We challenge this line of defense. Critics of self-ownership such as G.A. Cohen and Kasper Lippert-Rasmussen allege that factors other than self-ownership, such as resistance to burdensome interference in one's life or a right against unwanted bodily incursions, explain our intuitive aversion to the preceding sorts of cases. We agree that

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<sup>1</sup> See, e.g., Nozick 1974; Wheeler 1980; Steiner 1994; Vallentyne 1997; Mack 2002a, 2002b; Otsuka 2003. For objections, see, e.g., Cohen 1995; Lippert-Rasmussen 2008.

factors other than self-ownership explain our intuitions about these cases but we disagree with their alternative explanations. We argue that *disgust* explains these intuitions and present results from an original psychological experiment in support of this hypothesis.

Psychological research indicates that people are disgusted by invasions of bodily integrity. We believe that this effect is at work in common thought experiments about self-ownership. Intuitions opposing (e.g.) eyeball or kidney redistribution are not prompted by a principled commitment to self-ownership but rather by revulsion at violations of bodily boundaries.

To test this hypothesis, we conducted an experiment. We presented subjects with a variety of cases that involved equal violations of the self-ownership principle. One set of cases involved direct invasions of someone's bodily integrity; the other did not. We found that 68% of subjects thought the violation of self-ownership was wrong in the invasive cases but that only 37% thought the otherwise identical violation was wrong in the non-invasive cases. Furthermore, participants not only condemned the invasive violations of self-ownership more frequently than the non-invasive violations, but their overall evaluations of the invasive violations were harsher than their evaluations of the non-invasive violations—and this effect was stronger among those who were more sensitive to disgust.

These results have significant philosophical implications. Acquiring evidence that disgust is responsible for pro-self-ownership intuitions should reduce our confidence in those intuitions. After considering and rejecting some prominent “debunking” arguments predicated on disgust's evolutionary history, we provide alternative reasons to believe that disgust is not a reliable source of moral judgments. Rejecting the reliability of

disgust as a mechanism for producing moral beliefs coheres with our considered judgments about (i) the general kinds of considerations that are morally relevant and (ii) a range of particular moral problems. Evidence indicates that disgust can be manipulated in ways that we would not expect a reliable moral-belief-forming mechanism to be manipulated and that disgust regularly generates moral judgments that any plausible moral theory would reject.

Section 1 explicates the self-ownership thesis and canvasses some of the main arguments offered on its behalf. In section 2 we explore existing work on the psychology of disgust and formulate our hypothesis about the role of disgust in intuitions about self-ownership. Section 3 presents the results of our experiment. Section 4 defends our interpretation of the results against competing interpretations. Section 5 explains why our results militate against the self-ownership thesis. After considering objections, we conclude in section 6 that self-ownership provides an unsatisfactory foundation for agents' claims against interference and unwanted bodily incursions and that defenders of such claims would do well to eschew self-ownership in favor of alternative foundations.

§1

Self-ownership rights can be further specified as follows.<sup>2</sup> Self-owners have rights to control the use of their body and mind. These rights can be transferred to others by way of sale, gift, and so on. Relatedly, self-owners enjoy immunity from expropriation with regard to their mind, body, and labor power. Self-owners also possess rights permitting them to prevent violations of the preceding rights and entitling them to compensation in

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<sup>2</sup> See Vallentyne et al. 2005, 203-4.

the event that these rights are violated. While other rights might be implicated by the self-ownership thesis, we believe that these constitute its core.

We can distinguish between various grades and forms of self-ownership. One might enjoy less than full self-ownership should (e.g.) one have rights of control over one's body and mind but not rights of transfer. Furthermore, each of the fragment rights of self-ownership might be circumscribed in ways such that agents possess less than full self-ownership. However, the predominant view among self-ownership libertarians is that agents are indeed full self-owners.<sup>3</sup> So we'll focus on the thesis of full self-ownership. For our purposes, then, *self-ownership libertarianism* asserts that people ought to be in full control of their own bodies and minds such that others are prohibited from killing, assaulting, enslaving, kidnapping, raping, and imprisoning them. The self-ownership thesis also implies that people have the right to labor as they choose and that others are prohibited from removing parts of their body without their permission.<sup>4</sup>

Lippert-Rasmussen notes that the two major arguments offered on behalf of self-ownership are (i) that self-ownership is necessary for a certain kind of moral status, e.g., as an autonomous being or an end in oneself, and (ii) intuitions about concrete cases involving compulsory body part redistribution, especially eyes.<sup>5</sup> We leave the first type of argument to the side to focus on intuitions about concrete cases. In what follows, we'll briefly survey some famous cases offered on behalf of the self-ownership thesis. Each of these cases highlights in its own way the intuitive plausibility of protecting self-ownership rights even at the cost of social utility. We should mention that although some

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<sup>3</sup> See *ibid*; see also Nozick 1974, 172. See Otsuka (2003, 15) for a defense of less than full self-ownership.

<sup>4</sup> On the last point, see Vallentyne et al., 208.

<sup>5</sup> 2008, 93.

of these authors do not explicitly invoke the term “self-ownership,” they defend a claim that roughly corresponds to the self-ownership thesis, viz. that individuals possess stringent rights over what happens in and to themselves.

#### COMPULSORY EYEBALL REDISTRIBUTION

Thought experiments purporting to show the impermissibility of compulsory eyeball redistribution feature prominently in arguments about self-ownership.<sup>6</sup> Nozick, for example, criticizes John Rawls’s theory of distributive justice on the grounds that it has no principled objection to redistributing eyeballs to the blind if doing so optimizes the position of the worst off.<sup>7</sup> Nozick alleges that if individuals lack the sorts of entitlements to body parts that are guaranteed by self-ownership rights, then compulsory eyeball redistribution is permissible. He infers the falsity of the antecedent via *modus tollens*.

#### COMPULSORY KIDNEY REDISTRIBUTION

Other theorists highlight the intuitive force of self-ownership by appealing to the impermissibility of compulsory redistribution of other body parts like kidneys. John Arthur writes:

All of us could help others by giving away or allowing others to use our bodies. While your life may be shortened by the loss of a kidney or less enjoyable if lived with only one eye, those costs are probably not comparable to the loss experienced by a person who will die without any kidney or who is totally blind.<sup>8</sup>

However, Arthur argues that individuals’ rights over their bodies preclude the compulsory transfer of eyes and kidneys: “[Y]ou are entitled to keep your second eye and kidney [...] The reason for this is often expressed in terms of rights; it’s your body, you

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<sup>6</sup> See Arthur 2009; Christman 1991, 40; Cohen 1995, 243-4; Wolff 1991, 7–8.

<sup>7</sup> 1974, 206.

<sup>8</sup> 2009, 242.

have a right to it.”<sup>9</sup>

#### COMPULSORY BONE MARROW REDISTRIBUTION

Forcible organ redistribution finds a real-world analogue in the case of *McFall v. Shimp*. Robert McFall was diagnosed with aplastic anemia and was likely to die without a bone marrow transplant. Only his cousin, David Shimp, proved an adequate match. But Shimp refused to donate the marrow, so McFall filed suit to force the transplant. The judge ruled against McFall:

For our law to compel the defendant to submit to an intrusion of his body would change the very concept and principle upon which our society is founded. [...] For a society which respects the rights of an individual, to sink its teeth into the jugular vein or neck of one of its members and suck from it sustenance for another member, is revolting to our hard-wrought concepts of jurisprudence. Forcible extraction of living body tissue causes revulsion to the judicial mind.<sup>10</sup>

Michael Otsuka agrees that individuals’ self-ownership rights preclude their “being forced to donate nonvital body parts or products such as an eye or a kidney, or blood or bone marrow.”<sup>11</sup>

#### THE VIOLINIST

Judith Jarvis Thomson’s famous *Violinist* case also involves the use of someone’s body to save another’s life. Although this case does not involve compulsory redistribution of body parts, it involves the expropriation of body parts and a significant violation of bodily integrity. As part of her argument that a person’s rights over his or her body can trump another’s right to life, Thomson imagines that a famous violinist has a fatal kidney disease. You alone match his blood type. So the Society of Music Lovers kidnaps you and plugs the violinist’s circulatory system into yours such that your kidneys extract

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<sup>9</sup> Ibid.

<sup>10</sup> *McFall v. Shimp* 10 Pa. D. & C. 3d 90 (1978).

<sup>11</sup> 1998, 152.

poisons from his blood. Although unplugging from the violinist would result in his death, Thomson says that it would be “outrageous” to assert that the violinist’s “right to life outweighs your right to decide what happens in and to your body.”<sup>12</sup>

#### TRANSPLANT

Next consider Thomson’s *Transplant*. A surgeon has five patients who need various organs to survive and sees a healthy man nearby:

If the surgeon cuts the young man up, removes his parts, and transplants them into his five patients, the young man will die but the five will live. If the surgeon does not do that, the young man will live but the five will die.<sup>13</sup>

Thomson argues that it is intuitively clear that the surgeon should not perform the surgery.<sup>14</sup> As she puts it, “People own their bodies.”<sup>15</sup>

#### THE SURVIVAL LOTTERY

John Harris’s survival lottery is in some respects similar to *Transplant*. The lottery randomly selects a healthy person who will be killed and whose organs will be harvested to save the lives of at least two people dying of organ failure.<sup>16</sup> Harris defends the lottery on broadly utilitarian grounds. Even Harris acknowledges that his support for the lottery is counterintuitive but dismisses the relevance of common sense moral intuitions.<sup>17</sup> Others invoke the counterintuitiveness of the survival lottery as a *reductio ad absurdum* of moral theories that reject self-ownership.<sup>18</sup>

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<sup>12</sup> 1971, 49.

<sup>13</sup> 1990, 137.

<sup>14</sup> *Ibid.*, 135.

<sup>15</sup> *Ibid.*, 226.

<sup>16</sup> Harris 1975.

<sup>17</sup> *Ibid.*, 86-7.

<sup>18</sup> Ruth Chadwick (1989), for example, notes that views that deny individuals ownership rights over their bodies (specifically their kidneys) are subject to the objection that they can, in principle, permit the survival lottery.

The preceding cases are among the most famous in all of moral philosophy. Notice that in every case, someone's bodily boundaries are being invaded.

§2

All of the thought experiments above involve violations of bodily integrity. Violations of bodily integrity tend to be disgusting—the violations discussed in these thought experiments are no exception. This much seems uncontroversial. But we wish to defend a further claim. We believe not only that these thought experiments involve disgusting acts, but that the fact that these acts are disgusting helps explain why people think these acts are wrong. To be clear: our hypothesis is not that disgust is the *sole* psychological reason for people's intuitive resistance to these acts. People do not condemn *every* act that they find disgusting. Furthermore, some of these acts (i.e., *Transplant, the Survival Lottery*) involve intentional killing, and people would likely condemn them even if they were not disgusting. (That being said, we do believe that people would condemn these acts *less* if they were not disgusting: research indicates that people who are less sensitive to disgust are less likely to condemn various acts that involve intentionally killing one person in order to maximize social utility.<sup>19</sup>) However, in cases where the reasons against performing the act fall short of those involved in intentional killing and where the reasons *in favor* of performing the act are substantial (i.e., *Compulsory Eyeball/Kidney/Bone Marrow Redistribution, The Violinist*), the fact that the act is disgusting may be what tips the psychological balance of reasons in favor of condemnation.

Our hypothesis receives initial support from a growing body of research in empirical moral psychology linking disgust to moral judgment. One group of studies shows that

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<sup>19</sup> Choe and Min 2011.

people with a higher dispositional tendency to experience disgust are more likely to condemn a wide variety of acts. For instance, Inbar et al. found that people who scored higher on a standard disgust scale (i.e., a questionnaire that assesses how prone subjects are to being disgusted by various stimuli) were more likely to oppose gay marriage and abortion.<sup>20</sup> Terrizzi et al. found that those who scored higher on a standard disgust scale were more likely to oppose not only gay marriage and abortion, but also stem cell research, the right to die, and medical marijuana.<sup>21</sup> Horberg et al. demonstrated that those who reported experiencing disgust more often in their everyday lives recommended more severe punishment for other “purity” violations, such as being sexually promiscuous, buying music with sexually explicit lyrics, keeping an untidy and dirty living space, and purposefully wearing unmatched clothing.<sup>22</sup>

In addition to moral judgments about particular acts, higher disgust sensitivity has also been linked to moral judgments about particular groups of people. Jones and Fitness found that people who were more sensitive to disgust were more likely to convict a suspected murderer in a mock jury setting, provided a higher estimate of the culpability of other suspected criminals (e.g., con men, drunk drivers, and drug traffickers), and recommended that these criminals receive longer prison sentences.<sup>23</sup> Lieberman et al. found that people who were more prone to disgust were more likely to blame fat people for being fat and to endorse negative judgments about fat people, including “Fat people tend toward bad behavior,” “Sometimes I think fat people are dishonest,” and “In

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<sup>20</sup> 2009.

<sup>21</sup> 2010.

<sup>22</sup> 2009. Balzer and Jacobs as well as Smith et al. replicated the effect for gay marriage using an alternative, physiological measure of disgust.

<sup>23</sup> 2008.

general, fat people don't think about the needs of other people."<sup>24</sup> Hodson and Costello found that English Canadians who were higher in disgust sensitivity scored higher on a version of the Modern Racism Scale (modified to assess attitudes toward legal immigrants), endorsing judgments like, "Over the past few years, the government and news media have shown more respect for immigrants than they deserve," "Immigrants are getting too demanding in their push for equal rights," and "Discrimination against immigrants is no longer a problem in Canada."<sup>25</sup> Hodson and Costello also found that individuals who were more sensitive to disgust also viewed several other out-group categories less favorably, including ethnic foreigners (e.g., ethnic minorities and Muslims), deviant and low-status groups (e.g., the poor, AIDS patients, homosexuals, drug addicts, and the obese), and familiar-traditional out-groups (e.g., Jews, French Canadians, and Native Canadians). Choma et al. also found that non-Muslim Canadians who were more sensitive to disgust viewed Muslims less favorably.<sup>26</sup>

What the studies mentioned thus far show is that a greater propensity to experience disgust is regularly associated with stronger disapproval of certain types of acts and certain groups of people. What these studies do not show is that disgust *causes* people to disapprove of these acts and people, or even that disgust amplifies people's extant disapproval of these acts and people. Nevertheless, a number of other studies provide further reason to think that disgust can play these roles.

In what is commonly considered the most impressive illustration of disgust's moralizing power, Wheatley and Haidt hypnotically induced participants to feel a sudden

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<sup>24</sup> 2011.

<sup>25</sup> 2007.

<sup>26</sup> 2012.

pang of disgust every time they read an arbitrary word (“other” or “take”), and this in turn caused them to more strongly condemn acts depicted in vignettes that contained that “disgusting” word.<sup>27</sup> Crucially, this effect was found even when the act depicted in the vignette—picking topics for student-faculty discussions that would appeal to both students and faculty—was considered not to be wrong at all by participants who read the version that excluded the disgusting word.<sup>28</sup>

In another illustration of disgust’s moralizing power, Horberg et al. showed participants either a disgusting film clip involving a toilet full of feces or a sad film clip in which a boy watches his father die.<sup>29</sup> Participants then reported “how bad (in the sense of being immoral or wrong)” they judged various purity violations (e.g., purposefully wearing unmatched clothing and keeping an untidy living space) to be, and how severely they would punish these behaviors.<sup>30</sup> Participants’ answers to these two questions were averaged to create an overall measure of condemnation. Horberg et al. found that, although those who watched the sad video barely condemned these acts, those who watched the disgusting video condemned them more strongly.

Even if disgust cannot normally cause people to switch from thinking an act is morally good or neutral to thinking that it is wrong, other studies show that experimentally induced disgust can often increase the amount people disapprove of moral

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<sup>27</sup> 2005. But see David and Olatunji (2011). Instead of using hypnosis, they used evaluative conditioning to imbue arbitrary words with disgust-eliciting potential. While this did lead participants to view subsequent moral transgressions as more disgusting, it did not lead them to view them as more morally wrong.

<sup>28</sup> When asked why they thought the ostensibly well-meaning student in this vignette acted wrongly for trying to make the discussion appealing to both students and faculty, participants made claims like, “It just seems like he’s up to something,” and “It just seems so weird and disgusting.” Wheatley and Haidt 2005, 783.

<sup>29</sup> 2009.

<sup>30</sup> *Ibid.*, 969.

transgressions that they would have disapproved of anyway.<sup>31</sup> As a follow-up to Wheatley and Haidt's earlier study, Schnall et al. made participants feel disgust in one of four ways: by coating a nearby trash can with "fart spray," littering the participants' workspace with everything from chewed up pens to seemingly snotty tissues, asking participants to recall a disgusting experience from their lives, or having them watch a disgusting film clip.<sup>32</sup> Participants subsequently made harsher moral judgments about a wide variety of moral transgressions involving lying, cheating, stealing, incest, zoophilia, cannibalism, eating a dead pet, and diverting a trolley onto a sidetrack where it would kill one person instead of five.<sup>33</sup> Other studies have revealed similar effects on moral judgment with alternative methods of inducing disgust, including having participants drink a bitter beverage and having participants imagine themselves in disgusting situations depicted by a set of photographs.<sup>34</sup>

This brief survey of the psychological literature suggests that disgust can indeed influence moral judgment. However, one might wonder whether the kind of disgust elicited by the invasions of bodily integrity involved in self-ownership thought

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<sup>31</sup> See Pizarro et al. (2011) for a brief discussion of the different ways moral judgment may be tied to disgust. Although disgust does not *normally* cause people to condemn an action they would have otherwise approved of, it does not follow that it *never* does so. As we suggest above, we take the fact that disgust can often increase condemnation to be good evidence that in cases where there are competing considerations at play (e.g., self-ownership and the prevention of bad outcomes), disgust can tilt the balance in favor of condemnation. We are grateful to an anonymous referee for raising this issue.

<sup>32</sup> 2008.

<sup>33</sup> Some of these effects were limited to participants who were identified as high in "Private Body Consciousness" (i.e., participants who regularly paid special attention to their internal states).

<sup>34</sup> Eskine et al. 2011; Moretti and di Pellegrino 2010. Further studies have also found evidence for a causal connection between disgust and negative attitudes towards groups such as unfamiliar foreigners (Faulkner et al., 2004) and gay men (Inbar et al., 2012).

experiments is the same as that elicited by snotty tissues.<sup>35</sup> There is good evidence to think that it is.

The self-ownership thought experiments canvassed in the previous section feature a specific kind of disgust elicitor: what Haidt et al. call “envelope violations,” which involve “gore, surgery, puncture wounds, deformity, and other situations in which the normal exterior envelope of the body is breached or altered.”<sup>36</sup> According to Tybur et al., envelope violations are just one type of stimuli among many—including spoiled food, body products, death, and bad hygiene—that elicit what they call “pathogen disgust.” Pathogen disgust helps prevent microbial infection by motivating the avoidance of likely sources of contagion. Since the presence of pathogens presented a pervasive adaptive problem for ancestral humans, an emotion designed to detect pathogens and prevent people from coming into contact with them would have conferred a considerable adaptive advantage on those who had it.<sup>37</sup>

Across four studies, Tybur et al. show that pathogen disgust sensitivity is an empirically valid and theoretically fecund construct. Not only does pathogen disgust sensitivity provide a powerful explanation of why (e.g.) people who are disgusted by moldy food are also disgusted by bloody cuts, but it also predicts a variety of related phenomena, including neuroticism, perceived vulnerability to disease,<sup>38</sup> perceived

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<sup>35</sup> We lack the space for a detailed treatment of how to individuate psychological kinds, but our argument rests on the assumption that two psychological states are likely to be of the same kind if they are triggered by relevantly similar stimuli and have relevantly similar cognitive and behavioral consequences.

<sup>36</sup> 1994, 702.

<sup>37</sup> For a review of the relevant evidence, see Tybur et al. 2013 and Kelly 2011, chapter 2.

<sup>38</sup> Tybur et al. 2009.

attractiveness of unattractive faces,<sup>39</sup> and women's preferences for masculine faces.<sup>40</sup> In short, pathogen disgust sensitivity seems to be a real psychological trait with significant predictive power, and this vindicates our claim that the kind of disgust underlying our aversion to snotty tissues is the same kind of disgust underlying our aversion to body envelope violations of the sort involved in self-ownership thought experiments.

Because body envelope violations are just tokens of the same type of disgust elicitor used in the many studies implicating disgust in moral judgment, we have good reason to believe that the disgust elicited by body envelope violations can too play a causal role in producing people's moral judgments. Moreover, because the disgust sensitivity scales used in most of the studies mentioned above are dominated by items related to pathogen disgust, we have good reason to believe that people's sensitivity to pathogen disgust may also play some role in predicting their moral condemnation of acts involving body envelope violations.<sup>41</sup> In fact, the only studies that we could find on the relationship between disgust sensitivity and people's attitudes toward organ donation found that people who scored higher on a standard disgust scale rated the possibility of receiving various body part transplants to be more disgusting,<sup>42</sup> had more negative attitudes toward organ donation,<sup>43</sup> and were less likely to intend to donate their organs upon death than

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<sup>39</sup> Park et al. 2012.

<sup>40</sup> DeBruine et al. 2010.

<sup>41</sup> In fact, Tybur et al. (2009, 117) explicitly argue that the most recent version of Haidt et al.'s (1994) Disgust Scale—Olatunji et al. (2007)'s "The Disgust Scale-R"—"largely reflects sensitivity to pathogen disgust" and that pathogen disgust is the "construct [that] has been measured using existing measures of disgust sensitivity." The fourth study from Tybur et al. (2009) provides empirical support for these claims.

<sup>42</sup> Fessler and Haley 2006.

<sup>43</sup> Sherman et al. 2001.

those who scored lower.<sup>44</sup> Moreover, disgust sensitivity continued to predict negative attitudes and intent to donate even when the eight items related to death and body envelope violations were removed from the disgust scale used in those studies, suggesting that a general sensitivity to pathogen disgust elicitors rather than a specific sensitivity to death or body envelope violations is responsible for these effects.<sup>45</sup>

In what follows, we present the results of an original study designed to test the hypothesis that pathogen disgust influences people's moral judgments concerning violations of self-ownership. In this study, we presented participants with vignettes depicting equal infringements of a person's self-ownership, except that in half of these vignettes the infringement required committing a body envelope violation. We predicted that participants would condemn the infringement more often when the infringement required committing a body envelope violation. We also predicted that participants would condemn the infringement more strongly when the infringement required committing a body envelope violation, and that this effect would be larger among those who were higher in pathogen disgust sensitivity.

§3

Participants were randomly assigned to read one of six vignettes in which one person took another person's body part without his or her consent in order to save a third person's life. There were two independent variables. The first independent variable was the item that was stolen: a kidney, some blood, or some breast milk. The second independent variable was whether the item was stolen in a way that involved direct

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<sup>44</sup> Ibid.

<sup>45</sup> Ibid.

invasion of the person's physical integrity or in a way that did not. For example, participants who were assigned to the invasive version of the kidney condition read the following vignette:

#### KIT'S KIDNEY 1

Kit is dying of kidney failure. After an extensive search, Kit's doctor discovers that only one person is a match for a kidney transplant: Marvin. The doctor explains to Marvin that recent advances in surgical technology have made it such that the actual procedure of removing one of his kidneys would pose absolutely no risk to him whatsoever. In fact, the procedure would be completely painless. The doctor also explains to Marvin that he will not need his second kidney in the future. Even though Marvin recognizes that he will never need his spare kidney and that the surgery itself would neither pose any risk to his health nor involve any pain whatsoever, he refuses to give Kit his spare kidney.

Determined to save Kit's life, Kit's doctor decides to take Marvin's kidney without his consent. Kit's doctor slips a pill into Marvin's drink that puts Marvin into a very deep sleep later that night. Once Marvin is sleeping, Kit's doctor enters Marvin's house, painlessly cuts into Marvin's side, and removes his spare kidney. He then rushes to the hospital to transplant the kidney into Kit. Because the doctor stitches Marvin up perfectly, Marvin never has any reason to think someone has been inside of his body. Consequently, Marvin never checks the insides of his body to see if he still has the spare kidney, and so he never finds out that he has lost his kidney. Furthermore, as predicted by the doctor, Marvin never needs the spare kidney, and therefore does not suffer in any way as a result of having it removed. Kit's life is saved due to the organ transplant.

Those assigned to the non-invasive version of Kit's Kidney read a slightly different vignette:

#### KIT'S KIDNEY 2

Kit is dying of kidney failure. After an extensive search, Kit's doctor discovers that only one person is a match for a kidney transplant: Marvin. As chance would have it, Marvin had one of his kidneys removed as part of an earlier surgery. The removed kidney remains healthy, and is stored in a padlocked refrigerator in Marvin's house. The doctor explains to Marvin that he will not need his second kidney in the future, and so giving away his kidney would pose absolutely no risk to him whatsoever. Even though Marvin recognizes that he will never need his spare kidney, he refuses to give Kit his spare kidney.

Determined to save Kit's life, Kit's doctor decides to take Marvin's kidney without his consent. Kit's doctor slips a pill into Marvin's drink that puts Marvin into a very deep sleep later that night. Once Marvin is sleeping, Kit's doctor enters Marvin's house, cuts the padlock on Marvin's refrigerator, and removes his spare kidney. He then rushes to the hospital to transplant the kidney into Kit. Because the doctor welds the padlock back together perfectly, Marvin never has any reason to think someone has been inside of his refrigerator. Consequently, Marvin never checks the inside of his refrigerator to see if he still has the spare

kidney, and so he never finds out that he has lost his kidney. Furthermore, as predicted by the doctor, Marvin never needs the spare kidney, and therefore does not suffer in any way as a result of having it removed. Kit's life is saved due to the organ transplant.

Participants assigned to the blood or breast milk conditions were presented with one of four analogous vignettes in which either blood or breast milk was stolen in either an invasive or a non-invasive way. After reading one of these six possible vignettes, participants provided a rating of how strongly they believed that it was right or wrong to steal the kidney, blood, or breast milk on a scale of 1 to 7, where 1 represented full agreement with a statement of the form, "It was morally *wrong* for Kit's doctor to take Marvin's kidney without his consent in order to save Kit's life," and 7 represented full agreement with a statement of the form, "It was morally *right* for Kit's doctor to take Marvin's kidney without his consent in order to save Kit's life." This measure supplies both of our dependent variables: whether participants condemned the self-ownership violation more than they commended it (i.e., whether their rating landed on the "wrong" side of the scale), and how much they condemned rather than commended the self-ownership violation (i.e., what their specific rating was).<sup>46</sup> Before moving onto the rest of the survey, participants were taken to a separate page where they answered three questions intended to check for proper understanding of the story they had just read.

Participants then completed the Three Domain Disgust Scale.<sup>47</sup> The Three Domain Disgust Scale was designed to track individual differences related not only to pathogen

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<sup>46</sup> For ease of interpretation, we reverse coded the second dependent variable prior to running statistical analyses. This means that, for purposes of statistical testing, a rating of 7 represented full agreement with a statement of the form, "It was morally *wrong* for Kit's doctor to take Marvin's kidney without his consent in order to save Kit's life," and a rating of 1 represented full agreement with a statement of the form, "It was morally *right* for Kit's doctor to take Marvin's kidney without his consent in order to save Kit's life."

<sup>47</sup> Tybur et al. 2009.

disgust, but also to what Tybur et al. call “sexual disgust” and “moral disgust.” Like pathogen disgust, sexual disgust and moral disgust are hypothesized to have evolved as solutions to recurring adaptive problems in ancestral environments: avoiding costly sexual encounters with inadequate partners and avoiding costly relationships with norm-violating individuals.

The Three Domain Disgust Scale asks participants to rate how disgusting they find each of 21 items, seven of which are designed to elicit pathogen disgust, seven of which are designed to elicit sexual disgust, and seven of which are designed to elicit moral disgust. Items from the pathogen disgust subscale include “Stepping on dog poop” and “Standing close to a person who has body odor”; items from the sexual disgust subscale include “Watching a pornographic video” and “A stranger of the opposite sex intentionally rubbing your thigh in an elevator”; and items from the moral disgust subscale include “Shoplifting a candy bar from a convenience store” and “Intentionally lying during a business transaction.”<sup>48</sup>

We included the full Three Domain Disgust Scale in the present study because modest correlations have been found between pathogen disgust and both sexual and moral disgust, and we wanted to rule out alternative explanations of why we might have found the predicted interaction between pathogen disgust and invasiveness.<sup>49</sup> We felt that it was especially important to eliminate these alternative possibilities given that, unlike with pathogen disgust, there is a strong *prima facie* case to be made that sexual and moral disgust are tracking morally relevant considerations.

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<sup>48</sup> All three subscales of the Three Domain Disgust Scale demonstrated acceptable reliability; Cronbach’s alpha for pathogen disgust, sexual disgust, and moral disgust were .85, .86, and .93, respectively.

<sup>49</sup> Tybur et al. 2009.

In addition to the standard items on the Three Domain Disgust Scale, our version of the scale included three original items designed to ensure that participants were paying attention. These were items that we believed only participants who were randomly selecting answers could judge to be disgusting: sleeping in a hammock, walking on a sidewalk, and breathing in fresh air. Following the Three Domain Disgust Scale, participants completed a short demographics survey and were taken to a debriefing screen.

## RESULTS

Of the 800 participants who were paid to take the survey, 518 both demonstrated proper understanding of the vignettes and conscientiously completed the Three Domain Disgust Scale.<sup>50</sup> The responses of these 518 participants were then subject to statistical analysis.<sup>51</sup>

*Invasiveness.* The invasiveness of the self-ownership violation had an effect on how frequently participants condemned the self-ownership violation. Participants assigned to the invasive conditions were more likely to condemn the self-ownership violation than

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<sup>50</sup> Adult participants (212 men, 304 women, 2 unidentified,  $M_{\text{age}} = 31.7$  years, age range: 18-80 years) were recruited online through Amazon's Mechanical Turk ([www.mturk.com](http://www.mturk.com)) for a survey on "Questions about Morality." Of 518 participants, 515 reported living in the United States, two reported living in the United Kingdom, and one reported living in an unspecified country other than the United States, United Kingdom, Canada, Australia, Germany, South Africa, or India. Participants were compensated \$0.50 upon completion of the survey.

<sup>51</sup> With the exception of the chi square tests reported in footnotes 58 and 59, all hypotheses were tested using multiple regression analysis. The full regression model included eleven predictor variables: one representing the effect of invasiveness (invasive vs. non-invasive), two representing the effect of item stolen (kidney, blood, or breast milk), two representing the interaction of invasiveness with item stolen, three representing people's disgust sensitivity scores in each of the three domains (pathogen, sexual, and moral), and three representing the interaction of each of the three disgust sensitivity scores with invasiveness. The effects of item stolen and the interaction of item stolen with invasiveness were obtained by examining the change in explained variance due to removing the dummy variables associated with each effect from the full model. The standardized regression weights reported for each of the other predictors are those associated with the variables in the full model. Categorical variables were coded using unweighted effects coding.

those assigned to the non-invasive conditions.<sup>52</sup> While 68.3% of participants assigned to the invasive conditions condemned the self-ownership violation, only 37.2% assigned to the non-invasive conditions condemned it.<sup>53</sup>

The invasiveness of the self-ownership violation not only had an effect on how often participants condemned the self-ownership violation, but also on how *strongly* participants condemned the self-ownership violation. Participants assigned to the invasive conditions condemned the self-ownership violation more strongly than participants assigned to the non-invasive conditions.<sup>54</sup>

*Note.* This last test and the statistical tests to follow control for all other predictors we consider except for the predictor whose effect is being tested and any interaction terms with which it is associated. In other words, these tests examine whether changes in each predictor variable had an effect on how strongly participants condemned the self-ownership violation over and above any effects due to changes in the other predictor variables of which it is not a part. This allows us to eliminate the possibility that any effects we find for one particular predictor (such as the interaction of invasiveness with

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<sup>52</sup>  $\chi^2(1, N = 518) = 49.97, p < .001$ .

<sup>53</sup> The invasiveness of the self-ownership violation also had an effect on how frequently participants commended the self-ownership violation (i.e., how frequently their rating landed on the “right” side of the scale),  $\chi^2(1, N = 518) = 52.67, p < .001$ . While only 25.0% of participants assigned to the invasive conditions commended the self-ownership violation, 56.4% of participants assigned to the non-invasive conditions commended it. The 7.9% of participants in the invasive conditions and 18.8% of participants in the non-invasive conditions whose rating landed on the midpoint of the scale are naturally interpreted as having believed that the theft was permissible but not necessarily right.

<sup>54</sup>  $\beta = 0.339, t(506) = 8.65, p < .001$ . Where scores closer to 1 reflect greater commendation and scores closer to 7 reflect greater condemnation, the covariate-adjusted mean in the invasive conditions was 5.13 ( $SE = 0.12$ ), while the covariate-adjusted mean in the non-invasive conditions was 3.65 ( $SE = 0.12$ ).

pathogen disgust sensitivity) could be attributed to certain other predictors we consider (such as the interaction of invasiveness with sexual and moral disgust sensitivity).

*Item Stolen.* Type of item stolen had an effect on participants' condemnation of the self-ownership violation: participants condemned stealing a kidney more strongly than stealing blood, and stealing blood more strongly than stealing breast milk.<sup>55</sup> Item stolen did not interact with invasiveness.<sup>56</sup>

*Pathogen Disgust Sensitivity.* Participants who were more sensitive to pathogen disgust did not condemn the self-ownership violation any more or less strongly than participants who were less sensitive to pathogen disgust.<sup>57</sup> However, pathogen disgust sensitivity interacted with invasiveness in such a way that the effect of invasiveness on how strongly participants condemned the self-ownership violation was larger among those who were higher in pathogen disgust sensitivity: violating someone's self-ownership in a way that required committing a body envelope violation made a bigger difference to those who were more sensitive to pathogen disgust.<sup>58</sup> In brief, participants who were more sensitive to pathogen disgust were more sensitive to the invasiveness of the self-ownership violation.

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<sup>55</sup>  $F(2, 506) = 33.88, p < .001$ . The two dummy variables associated with item stolen were recoded using dummy coding to allow for pairwise comparisons. Pairwise comparisons revealed that participants believed stealing a kidney ( $M_{\text{adj.}} = 5.22, SE = 0.15$ ) was worse than stealing blood ( $M_{\text{adj.}} = 4.44, SE = 0.15$ ),  $p < .001$ , and that stealing blood was worse than stealing breast milk ( $M_{\text{adj.}} = 3.52, SE = 0.14$ ),  $p < .001$ .

<sup>56</sup>  $F(2, 506) = .037, p = .964$ .

<sup>57</sup>  $\beta = 0.005, t(506) = 0.12, p = .903$ .

<sup>58</sup> In other words, the main effect of invasiveness was qualified by an interaction with pathogen disgust sensitivity,  $\beta = 0.095, t(506) = 2.121, p = .034$ . Simple slopes analyses (Aiken and West 1991) revealed that pathogen disgust sensitivity interacted with invasiveness such that invasiveness had a greater effect among those who were high (+1 SD) in pathogen disgust sensitivity,  $\beta = 0.434, p < .001$ , than among those who were low (-1 SD) in disgust sensitivity,  $\beta = 0.243, p < .001$ .

*Sexual Disgust Sensitivity.* Participants who were more sensitive to sexual disgust did not condemn stealing the self-ownership violation any more or less strongly than participants who were less sensitive to sexual disgust.<sup>59</sup> Sexual disgust sensitivity did not interact with invasiveness.<sup>60</sup>

*Moral Disgust Sensitivity.* Participants who were more sensitive to moral disgust condemned the self-ownership violation more strongly than participants who were less sensitive to moral disgust.<sup>61</sup> Moral disgust sensitivity did not interact with invasiveness.<sup>62</sup>

In sum, we found support for all of our hypotheses. We found that participants condemned equal violations of self-ownership more strongly and more often when those violations of self-ownership involved a body envelope violation, and we found that the difference that a body envelope violation made to how strongly participants condemned the self-ownership violation was larger among those who were higher in pathogen disgust sensitivity. We also found two unpredicted effects. First, people condemned stealing kidneys more strongly than stealing blood, and stealing blood more strongly than stealing breast milk. Second, people who were more sensitive to moral disgust condemned the self-ownership violations more strongly than those who were less sensitive.

§4

This section defends our interpretation of the results against alternative explanations. We contend that disgust is a more likely explanation for our intuitive resistance to the compulsory redistribution of body parts than either a belief in self-ownership or the

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<sup>59</sup>  $\beta = -0.018, t(506) = -0.37, p = .715.$

<sup>60</sup>  $\beta = -0.029, t(506) = -0.60, p = .550.$

<sup>61</sup>  $\beta = 0.132, t(506) = 3.07, p = .002.$

<sup>62</sup>  $\beta = -0.061, t(506) = -1.41, p = .159.$

alternative explanations proposed by critics of self-ownership. The next section argues that learning about disgust's role in these intuitions should reduce our confidence in them.

Here is one modest upshot of our study: it suggests that the cases involving compulsory body part redistribution that are invoked to support self-ownership in fact fail to determinately support self-ownership. If subjects had a principled intuitive commitment to self-ownership, we should expect them to equally condemn both versions of Kit's Kidney and its analogues since both versions involve equal violations of self-ownership. (We defend the claim that the cases involve equal violations of self-ownership against objections below.) But they don't equally condemn both cases. So we agree with Cohen and Lippert-Rasmussen that a belief in self-ownership is not the basis for our intuitive disapproval of compulsory body part redistribution and thus that our intuitions about these cases do not furnish unambiguous support for the self-ownership thesis.

We believe that we can go further and show that these results should undermine our confidence in self-ownership intuitions. But first, let us explain why we disagree with Cohen's and Lippert-Rasmussen's alternative explanations for our intuitive resistance to compulsory body part redistribution. The first proposed explanation is intuitive resistance to burdensome interference in one's life. For support, Cohen imagines a world in which everyone is born blind and the state implants two eyes into each person at birth. Whenever an adult accidentally goes blind, the state enforces a lottery-based redistribution of eyes to ensure that each person has at least one eye. Cohen argues that we intuitively resist eye redistribution in this case even though people don't own their

eyes *ex hypothesi*. Thus, the “suggestion arises that our resistance to a lottery for natural eyes shows not belief in self-ownership but hostility to severe interference in someone’s life. For the state need never vest ownership of the eyes in persons.”<sup>63</sup>

Our results militate against Cohen’s explanation. They indicate that people are opposed to compulsory body part redistribution even when it does not entail severe interference. For example, nearly 85% of participants judged it wrong to take Marvin’s kidney from his body even though the taking did not interfere with Marvin’s life.<sup>64</sup> Marvin suffered no pain, no inconvenience, no loss of welfare or opportunity, and none of his plans were frustrated.<sup>65</sup> So, at the very least, it cannot be that resistance to severe interference is wholly responsible for our intuitions about these sorts of cases.<sup>66</sup>

Lippert-Rasmussen suggests that “either considerations different from those involved in the self-ownership thesis or a specific right among the large cluster of rights that one’s right over oneself is taken to amount to underlies the hostility to compulsory eye redistribution.”<sup>67</sup> The specific right he has in mind is “a right against unwanted bodily incursions.”<sup>68</sup> For support, he imagines a world in which half the population is born with two pairs of eyes and the other half is born with no eyes. In the sighted half, the first pair of eyes is located in the normal spot and functions normally. The second pair is located

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<sup>63</sup> 1995, 244.

<sup>64</sup> 71.8% of participants in the invasive/blood condition judged it wrong to take the blood, and 49.4% of participants in the invasive/breast milk condition judged it wrong to take the breast milk.

<sup>65</sup> Even if one alleges that the loss of a body part or the extra sleep induced by the drug is interference in itself, note that Marvin and his counterparts are drugged and lose their body parts in both the invasive and non-invasive cases.

<sup>66</sup> It’s not clear if Cohen himself thinks that hostility to interference can *completely* explain our intuitions. However, he does put it forth as an important explanation and our results suggest that, at a minimum, his account needs to be supplemented with ours.

<sup>67</sup> 2008, 98-99.

<sup>68</sup> *Ibid.*, 97.

inside the person's shoulder and plays no functional role whatsoever—although they would enable sight were they placed in someone's eye sockets. Furthermore, when a sighted person turns twenty years old, her body spontaneously expels the spare pair of eyes. So whenever a person expels their spare pair of eyes, the state forcibly redistributes them to a blind person and gives him normal sight. Lippert-Rasmussen writes, "On the assumption that I own parts of my body even when they are reversibly located outside my body, there is a violation of self-ownership."<sup>69</sup> However, he notes that most people would not oppose his revised redistribution scheme. Thus, intuitive resistance to eyeball redistribution is likely not due to a commitment to the self-ownership thesis.

Our findings seem to support Lippert-Rasmussen's claim that most people would permit his revised redistribution scheme because it does not involve *invasive* takings. So what explains the different intuitive responses to his revised eyeball redistribution scheme and the standard scheme? "Considerations different from those involved in the self-ownership thesis or a specific right" against unwanted bodily incursions? Our suggestion is that both can explain our intuitions about the two redistribution schemes. It's plausible that people accept something like a right against unwanted bodily incursions, a right that is violated in the standard redistribution scheme but not in the revised scheme. Our findings indicate that people are more hostile to body part takings when they involve bodily incursions than when they do not. However, we propose that acceptance of this right is itself motivated by disgust, rather than a commitment to the self-ownership thesis.

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<sup>69</sup> Ibid., 98-99.

Our evidence suggests that people endorse a right against unwanted bodily incursions *because* they're disgusting. If people endorsed a right against unwanted bodily incursions simply because they believed that unwanted bodily incursions were wrong *tout court*, we would expect the invasiveness of the self-ownership violation to have had just as strong an effect on the condemnation of those who were low in pathogen disgust sensitivity as it did on the condemnation of those who were high in pathogen disgust sensitivity. But this is not what we found. We found that the invasiveness of the self-ownership violation had a larger effect on the condemnation of those who were higher in pathogen disgust sensitivity.

Before proceeding, let's pause to consider an objection. Perhaps the different conditions in the experiment *are* morally different because the distinction between attached and detached body parts is morally significant. On this view, we only have robust ownership rights over intact body parts. Once body parts are physically detached, they cease to be part of your body or self and thus are no longer protected by self-ownership rights (or perhaps the protections afforded by self-ownership are sufficiently weakened so as to permit redistribution). If so, our findings would be consistent with the self-ownership thesis.

We have three replies to this objection. First, as Lippert-Rasmussen observes, "most libertarians take the objects of self-ownership to include bodily parts that have been separated from one's body as well as the more common intact parts of one's body."<sup>70</sup>

Otsuka, for instance, says that self-ownership

extends beyond a right against the sorts of painful and invasive incursions upon (other parts of) one's body which might be necessary in order to force [donations of body parts]. For

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<sup>70</sup> 2008, 100.

suppose that in order to preserve the functioning of one of one's eyes or kidneys it must be temporarily removed and then reimplanted after it has been treated. One would still have a strong right of control over the disposition of that organ between the point of removal and reimplantation.<sup>71</sup>

Hillel Steiner argues similarly that someone has “unencumbered title” to a blood-stained carpet if it's a carpet that one owns and the blood on the carpet is one's own.<sup>72</sup> Samuel Wheeler agrees that “attachment is not essential to whether a thing is part of our body or whether we have body rights with respect to it.”<sup>73</sup> He says, “The non-routineness of removal and transplant of body parts is similarly morally irrelevant to our rights with respect to our bodies. If we now have special exclusive rights to the use of our arms and legs, developments in medical technology which allowed us to pluck them off and store them for later use or donate them to the armless would not remove that right.”<sup>74</sup> So our argument at least has force against the *majority* self-ownership view, which claims that people retain ownership rights over detached body parts.

Next, our findings provide an error theory for the minority self-ownership libertarian view that the wrongness of equally painless, costless, and unknown takings of body parts depends on whether those parts are attached. This belief is plausibly explained by the differences in the disgustingness of the takings rather than differences in the wrongness of the takings. At the least, our findings shift the burden of proof to the self-ownership theorist to provide a principled, non *ad hoc* explanation for why painless, costless, and unknown self-ownership violations that break skin are worse than those that break refrigerator padlocks.

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<sup>71</sup> 2003, 15 fn. 18.

<sup>72</sup> 2000, 77.

<sup>73</sup> 1980, 178.

<sup>74</sup> *Ibid.*, 174-5.

Lastly, even if self-ownership theorists can come up with such an explanation, we do not think this leaves them with a theory of self-ownership that is robust enough to do the work they want it to do. Self-ownership libertarians need to claim that people are entitled to the *products* of their bodies and not only their bodies themselves if their views are to have their intended implications for rights over extra-personal property. Self-ownership libertarians, both left and right, generally agree that self-ownership implies that agents are entitled to the value added by their labor to their fair share of natural resources (as specified by one's favored theory of world-ownership, be it Lockean or egalitarian). As Barbara Fried notes, even left-libertarians defend "a limited form of capitalism, which entitles people to keep that portion of the value of their product added by their own labor, but no more."<sup>75</sup> This claim implies that people are entitled to the products of their bodies (here, the value added by their labor) even when those products are not literally *part* of their bodies. These entitlements could not plausibly get off the ground if agents only had robust ownership rights over intact body parts.

If we're right, intuitive opposition to compulsory body part redistribution does not provide determinate support for the self-ownership thesis. Disgust supplies a better explanation of our intuitions. The next section explores the epistemic implications: we'll argue that this result ought to reduce our confidence in these intuitions.

§5

Simply identifying the mechanism responsible for producing a particular moral intuition tells us nothing about whether that intuition should play a role in our moral theorizing. Figuring that out requires answering a further question: is that mechanism reliable? In

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<sup>75</sup> 2004, 67.

this section, we argue that we have special reason to believe that disgust is unreliable, and that we should therefore reduce our confidence in whatever moral intuitions we have that seem to be driven by disgust.

There are several ways one might go about undermining the putative reliability of a psychological mechanism that produces moral beliefs. One popular strategy is to claim that there is an evolutionary explanation for why we have the psychological mechanism in question, that there would be no reason to expect evolution to produce psychological mechanisms that track the moral truth, and that we should therefore expect the psychological mechanism in question to be unreliable. Unfortunately, if targeted evolutionary debunking arguments of this sort work at all, they tend to work only against those who believe there are stance-independent moral facts.<sup>76</sup> Our body of evaluative stances cannot be systematically off-track with respect to the moral truth if the moral truth is itself somehow constituted by these stances, as asserted by (e.g.) constructivist theories. Furthermore, to the extent that all of our psychological mechanisms have an evolutionary explanation, these arguments will likely overgeneralize, leaving us with no reliable psychological mechanisms at all with which to theorize about morality.

Another strategy involves identifying the domain in which the psychological mechanism in question evolved to solve some adaptive problem and arguing that the operation of that psychological mechanism outside of that domain is likely to be unreliable.<sup>77</sup> Yet these “byproduct” arguments too overgeneralize, likely undermining not

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<sup>76</sup> See Street 2006; Kahane 2011.

<sup>77</sup> Kelly 2011.

only the reliability of disgust in moral domains, but the reliability of (e.g.) explicit reasoning in purely theoretical (and evolutionarily novel) domains.<sup>78</sup>

We prefer a simpler “debunking” strategy. We will avail ourselves of the industry-standard method of justification in moral and political philosophy: reflective equilibrium. Roughly, we achieve narrow reflective equilibrium when we produce coherence among our considered moral judgments concerning particular cases and general principles. We revise our judgment about a particular case if it violates a general principle we refuse to revise; we revise a general principle if it implies a particular judgment that we cannot accept. We eventually arrive at an acceptable balance of general principles and particular judgments. Wide reflective equilibrium is achieved when we produce coherence among our moral beliefs and (*inter alia*) relevant social scientific theories such as those concerning the psychology of disgust. We contend that rejecting the reliability of disgust as a mechanism for producing moral beliefs coheres with our considered judgments about (i) the kinds of considerations that are morally relevant and (ii) a range of particular moral problems. We believe that disgust can be manipulated in ways that we would not expect a reliable moral-belief-forming mechanism to be manipulated, and that it has produced—and *continues* to produce—moral judgments that any plausible moral theory would reject.

Our first argument considers the kinds of inputs on which the disgust mechanism’s output depend. Does a belief in the moral relevance of these inputs cohere with our considered judgments about the general types of considerations that could be morally relevant? We will argue that it does not.

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<sup>78</sup> Plakias 2013, 6. Berker 2009, 320. Plakias attributes this kind of debunking argument to Daniel Kelly. Berker finds a similar style of argument in the work of Josh Greene and Peter Singer.

Suppose you know nothing about a moral-belief-generating mechanism—for example, you don't know what verdicts it reaches about particular cases or general principles—except that its verdicts vary depending on whether there is fart spray in the air or snotty tissues nearby. Would we expect a reliable way of forming moral judgments to be sensitive to these kinds of considerations? At first glance, the answer clearly seems to be “no.” Just as we should doubt the reliability of a thermometer that responds to considerations that are irrelevant to the temperature of the air (e.g., whether there is fart spray in the air or snotty tissues nearby), we should doubt the reliability of a moral-belief-generating mechanism that responds to considerations that are irrelevant to the morality of the evaluated act (e.g., whether there is fart spray in the air or snotty tissues nearby). Unfortunately for the disgust advocate, studies canvassed in section 2 reveal disgust to be sensitive to exactly these kinds of morally irrelevant considerations. It seems to follow that we have *prima facie* reason to doubt the reliability of disgust, and that we should therefore reduce our confidence in judgments driven by disgust.

The disgust advocate might attempt to respond to this argument by showing that seemingly irrelevant factors only influence our moral judgments at the periphery, or that they only slightly alter the severity of these judgments such that the resulting judgments are always within a reasonable margin of error. This kind of reply can succeed only if we have no other reasons for doubting the reliability of disgust. This leads us to our second argument: disgust tends to render verdicts about particular acts and problems that do not cohere with our considered moral judgments. The first line of evidence for this claim comes from the studies canvassed in section 2. In these studies, either a higher dispositional sensitivity to disgusting stimuli or a temporarily induced state of disgust

influenced people's moral judgments. In many cases, disgust increased people's condemnation of acts that few moral theories would condemn, and condemnation of which few moral theories would approve: marrying gay people, using stem cells to cure terminal illnesses, and smoking marijuana to relieve chronic pain. In other cases, disgust increased people's condemnation of acts that virtually *no* moral theory would condemn, and condemnation of which most moral theories would themselves condemn: trying to organize a student-faculty discussion that would appeal to everyone involved, purposefully wearing unmatched clothing, and keeping an untidy and dirty living space.<sup>79</sup> In still other cases, disgust increased negative attitudes toward various groups, attitudes that absolutely every plausible moral theory would condemn: assuming that fat people are bad people, disrespecting and denying equal rights to legal immigrants, and disfavoring a whole host of other out-groups, including the poor, AIDS patients, Muslims, and Jews.

Our second line of evidence comes not from psychology, but from history. As Martha Nussbaum argues, "throughout history, certain disgust properties—sliminess, bad smell, stickiness, decay, foulness—have repeatedly and monotonously been associated with, indeed projected onto, groups by reference to whom privileged groups seek to define their superior human status. Jews, women, homosexuals, untouchables, lower-class people—all these are imagined as tainted by the dirt of the body."<sup>80</sup> No plausible moral theory would recommend that the members of any of the groups currently or historically

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<sup>79</sup> One might worry that, since Horberg et al. pooled the latter two items with two items involving sex, people's greater condemnation of this group of acts is primarily attributable to people's greater condemnation of the two sexual items rather than the two non-sexual, morally neutral items. Yet item analyses do not support this claim. In fact, some of the most reliable effects of disgust were found for the non-sexual items. Horberg, personal communication.

<sup>80</sup> 2004, 108.

stigmatized as disgusting deserve the mistreatment these negative attitudes have motivated.

We believe that reflection on these considerations should make us suspicious of disgust. The fact that disgust is regularly associated with the condemnation of acts and groups of people that most everyone can agree are unworthy of condemnation suggests that it is prone to false positives. Just as a fire alarm that consistently beeps in the absence of a fire is an unreliable instrument, so too is a moral-belief-generating mechanism that consistently yields false positives of its own. At the least, we think we have made a strong prima facie case for doubting the reliability of disgust as a mechanism for generating moral beliefs.

§6

Our findings suggest objections to both defenders and critics of the self-ownership thesis. Defenders err in thinking that a commitment to self-ownership underlies intuitive resistance to a wide range of concrete cases involving body envelope violations. Critics' alternative candidates for the underlying causes of our intuitive resistance to these cases either miss the mark or tell only part of the story.

To close, let us suggest that we can accommodate the intuitively compelling implications of self-ownership without endorsing the self-ownership thesis. Part of the attraction of the self-ownership thesis is its ability to substantiate what Otsuka calls “anti-paternalistic and anti-moralistic” conclusions of a Millian variety.<sup>81</sup> We agree with self-ownership libertarians that individuals should enjoy stringent protections from coercive interference with their private choices. But we also think that our arguments show that

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<sup>81</sup> 2003, 2.

self-ownership is not a secure foundation for these protections. Thus, those who prize the Millian liberties should seek their protection elsewhere.

While there are a variety of strategies for defending the Millian liberties that we lack the space to examine here, we believe that the strongest reasons to protect the Millian liberties are roughly the consequentialist reasons given by Mill himself. In brief, individuals tend to have better information about their own well-being and more incentive to promote it than third parties.<sup>82</sup> No doubt there are exceptions to this rule, but laws usually govern on the basis of the rule rather than the exception. Thus we believe that, despite the hint of paradox, the social good will be best promoted by a system that generally prohibits interference with private choices (and body parts) in an effort to promote the social good.

Nevertheless, a consequentialist basis for the Millian liberties permits interfering with those liberties for the sake of the social good *in principle*. Yet we do not find this result troubling: our findings suggest that we should be suspicious of our intuitive resistance to the in-principle permissibility of such interference. Despite the natural affinity between the self-ownership thesis and the Millian ideal of liberty, liberalism is better served by other foundational principles.

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<sup>82</sup> See Mill 1991, chapter 4.

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