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IS MORAL DISGUST GOOD OR BAD?**1. Introduction**

Research on the morality of disgust has not only been pioneering in moral psychology and neuroscience, but it has also stimulated debates and influential accounts in the latest decades. A distinctive feature of this research area is that, based on the empirical findings correlating disgust with conservatism, most disgust scholars have fed arguments for its moral unreliability and concluded with moral condemnation of this emotion. Just to mention a few positions – as reported by Jason Clark and Daniel Fessler (2015) – some philosophers have reserved no place to disgust in morality or law (Nussbaum 2009, 2010), while others have compared physical to moral disgust, concluding that the former leads highly to false positives and the latter to slippery forms of moralization (Kelly 2011). Disgust is considered primitive, «unreasoned» (i.e., irrational), non-flexible, and prone to external justifications by some psychologists (Russell, Giner-Sorolla 2013), especially if compared to anger, that, under certain circumstances, seems to pass the test of morality. Moreover, it is stated that disgust elicits «unnecessary» intuitions (Bloom 2013), that it is not pro-social and associated with shame (another non-prosocial emotion) (Giner-Sorolla, Espinosa 2011), that disgust is capable of compromising empathy (Ehrlich, Ornstein 2010, Rifkin 2009), so on and so forth. The literature is so insistent with this negative view that the expression ‘moral disgust’ has been no less than an «oxymoron» (Giner-Sorolla et al. 2018, 224).

In this paper, I will examine common arguments about whether relying on disgust in the moral domain is to be considered good or bad. The case for immoral (vs. moral) disgust is a very relevant question from a meta-ethical and normative standpoint, as it suggests whether, and to what extent, any ethical conclusions may be inferred

from this empirical research. Of course, part of a response to this question depends on believing or not that emotions, whose fundamental role in morality has been acknowledged by neuroscientific and psychological research of the last three decades (Corbellini, Sirgiovanni 2013), should be taken as reliable sources for moral choices. This philosophical query has received divergent and multifaceted replies in the theoretical debate (Liao 2016). Hereby, I will not offer an extensive account of moral emotions but I will be committed to the unspecific idea that emotions can be integrated into normative accounts of moral agency. What follows is an attempt to problematize the suggestion that we are justified in firmly believing that disgust is an ethically «dumb» – or alternatively, an ethically «smart» (see Giner-Sorolla et al. 2018, 276) – emotion.

2. Moral disgust: a background

What makes moral disgust so special? This is a pertinent question and the title of a detailed recent overview written by exponents in the field (Giner-Sorolla et al. 2018). The authors state that the allure of disgust stands in being «anything but a simplistic state» (ibid., 278), being instead complicated in structure, with multiple functions, easily deployable for different purposes, and consequentially, a generator of – what we may call – *philosophical* contradictions.

Curiously enough, even if there are traces of a spectrum of similar notions in the ancients (Lateiner, Spatharas 2017), the term (that is, the conceptualization of) ‘disgust’ emerged no sooner than in the Late Middle Ages (see Tedeschini 2018, Franchini in this issue). As reported by medical historians, the associated idea of “contagion” was confusedly expressed in the form of contamination from polluted air (Corbellini 2014). Contagion theory arose primitively in the Renaissance, where the ancient theory of *miasma* (bad air) was still prevailing, but it was not accepted until bacteriology imposed the germ theory of disease in late 19th-century medicine. Nevertheless, in the past centuries, the notion of miasma used to play a role in socio-cultural attitudes similar to today’s notion of contagion. Namely, it culturally justified a series of behaviors to avoid certain situations and persons, and consequentially, to discriminate and marginalize others both in physical and moral terms (e.g., the ‘foreigner’ as a vehicle of miasma). Modern and early contemporary philosophers (e.g.,

Thomas Hobbes, Immanuel Kant, Friedrich Nietzsche, and Sigmund Freud) discussed disgust also in connection with ethical and aesthetical issues, but no approach had more impact on disgust research than Darwinism. Nowadays, disgust is acknowledged as a basic, adaptive emotion by most scholars (from Darwin 1872, Ekman, Friesen 1975, Ekman 1999), selected by evolution as a pathogen avoidance detector. This is no surprise if we remind that Charles Darwin himself was an enthusiastic defender of the early bacteriologists¹. Someone (Panksepp 2007) – still in an evolutionary framework – suggests that disgust is a mere reflex, as it is impenetrable to consciousness. Disgust has detectable neurocognitive correlates (i.e., bilateral insula, Klucken et al. 2012), specific physiological manifestations (nausea, lower blood pressure, lower skin conductance, etc.), a characteristic facial expression, and identifiable associated behavior (i.e., avoidance). Excessive disgust is also a predictor of specific psychiatric disorders (e.g., obsessive-compulsive disorder, phobias, and eating disorders). Nevertheless, the most interesting byproduct of this emotion, selected by evolution for avoiding intoxication and in general infectious threats (or ‘microscopic threats’²), is its regulative role in social groups.

In a seminal 1986 work, Paul Rozin and colleagues showed experimentally that the contagion heuristics – i.e., a mental shortcut linked to the elicitation of disgust that makes people avoid contact with alleged ‘contaminated’ people or objects – can be activated and operates similarly in domains other than the physical, like the moral one. The sort of ‘magical thinking’ (so-called «*sympathetic magic*») described by the anthropologists James Frazer and Marcel Mauss in non-Western tribes was thus shown also in Western societies. In the experiments by Rozin and colleagues, well-educated people refused, for instance, to wear Adolf Hitler’s sweater, thus showing that an inanimate object was believed to possess the moral vices of its owner («law of *similarity*») and that these vices could be transferred to other people with mere physical contact («law of *contagion*»). The same

¹ In a letter to F.J. Cohn, dated 3 January 1878, Darwin writes: «I well remember saying to myself, between twenty and thirty years ago, that if ever the origin of any infectious disease could be proved, it would be the greatest triumph to science; and now I rejoice to have seen the triumph» (Darwin 1878).

² ‘Macroscopic threats’ are more elicitors of fear.

was also true in a positive way (i.e., the belief that objects can transfer the positive qualities of a good owner). In sum, disgust was associated with two key patterns: conflicting the physical with the moral, and irrationality.

In the subsequent two decades, this study originated an intense research activity investigating how disgust goes «from oral to moral» (Rozin et al. 2009). Remarkably, according to Rozin and his followers, the 'disgust output program' can be triggered by different situations, and thus identifies three routes and main functional components of disgust, each corresponding to «more cognitively elaborated appraisals» (ibid., 1180). They are, in order: 1) aversion to a bitter taste, triggered by food (corresponding to "distaste"); 2) protection from pathogenic contamination, elicited by reminders of animal nature (i.e., 'physical' disgust); and 3) extension to (a specific class of) moral transgressions by certain people or social groups ('moral' disgust). Disgust is, thus, a constituent of a complex suite of neurophysiological mechanisms, the so-called 'Behavioral Immune System' (BIS), which can detect threatening cues from ingestion and contact exposures and controls responses of behavioral aversion and avoidance (Schaller and Park 2011).

Elicitors of disgust are death, animal, hygiene, food, body products, but also body envelope violations, sex, and moral violations (Haidt et al. 1994). Research has established that disgust inputs may come from all five senses (taste, smell, touch, sight, and sound) so that we feel disgusted by certain rotten tastes, pungent odors, clammy textures, brownish/gray colors, and slithery noises. All these sensory routes have been used to induce and manipulate disgust experimentally (e.g., Chapman et al. 2009, Eskine et al. 2011, Inbar et al. 2012a, Oum et al. 2011, Curtis et al. 2004, Seidel, Prinz 2013). Beyond these modalities, imagination through reading or listening disgusting stories (Haidt et al. 2000) and hypnosis (Wheatly, Haidt 2005) have also been used. However, more recently, findings on the impact of disgust on moralization (or better, amplification of moral judgment) through some specific senses – for example, sound, touch or vision – showed to have poor (or null) significance compared to more robust findings obtained through other sensory channels, such as gustatory and olfactory inductions (Landy, Goodwin 2015a, 2015b). Imaged or mental inductions showed no effect. One might wonder if this resides

in the fact that some senses seem more primitively connected to disgust (taste and odor, maybe). This could be explained by observing that taste and smell are more ‘visceral’ as they directly activate brain regions like the insula (Schnall et al. 2015) or that these modalities seem to be present in newborns (e.g., they show distaste during breastfeeding), whereas physical disgust is shown in children only after toilet training (Rozin, Fallon 1987). However, very recently, some replication studies have questioned the effects of taste (Ghelfi et al. 2020) and smell (Bialek et al. 2020) as well. A conclusion is not straightforward. These negative findings may depend on many factors, among which the conditions under which the replications were conducted. An important factor is the subjective sensitivity to these elicitors (e.g., how much individuals are prone to *feel* disgusted by certain odors or taste) (Schnall et al. 2015, Bialek et al. 2020, see also Chapman, Anderson 2013, Liuzza in this issue), a circumstance that recently made experimenters focus on individual disgust sensitivity. Alternatively, this negative effect might be due to some other confounders (e.g., attributing the feeling to its true source, see Schnall et al. 2015 or awareness of the influence of the elicitor on moral judgment, see Ghelfi et al. 2020, or co-occurrence of other emotions, such as anger, see Giner-Sorolla et al. 2018).

An interesting issue is a contribution that experiential influence, especially socio-cultural values, has on the tuning of moral disgust during psychological development, in comparison with dispositional personality traits to disgust that can be also genetic and, thus, innate (Haidt 2012). Along with ontogeny, another stimulating question regards phylogeny, particularly understanding whether moral disgust is only human or present in other species in some primitive forms. An example of a rudimental form of moral disgust might occur in mating. The choice of sexual partners, through feeling or not feeling disgusted towards an exchange of fluids with a potential sexual partner, might be a mechanism selected to avoid high fitness costs such as genetic compatibility and reproductive value (Tybur et al. 2013).

Experimental research by Jonathan Haidt (2001), a Paul Rozin’s pupil, showed that disgust facilitates preference for gut choices (instead of reason responses) in both non-moral and moral disgust-driven intuitions, that people are dumbfounded after making choices triggered by disgust, and that they make *post-hoc* confabulations to

rationalize their gut choices. Another interesting feature of the disgust system is that it can produce many false positives. As Mark Schaller and Justin Park (2011, 99) highlight, disgust cues «are only imperfectly correlated with actual infection». The Garcia effect, a form of Pavlovian adverse conditioning for food for which we refuse specific food that caused nausea or vomiting, is also known for being an irrational inference from the 1950s. In an analogy with smoke detector devices (taken from Nesse 2005), which are very input-sensitive devices, this strategy is due to minimizing false-negative errors (i.e., erroneously inferring the absence of pathogens where they exist), which can be fatal, compared to innocuous false-positive errors (i.e., erroneously inferring the presence of pathogens where there are none) (see Schaller and Park 2011). This signal-detection bias is considered, however, to potentially have negative implications. In the physical domain, disgust-sensitive individuals face the so-called 'omnivore dilemma' (Rozin 1976), namely they protect themselves too much at the cost of not exploiting enough food resources, whereas, in the social and moral domain, disgust-sensitive individuals are shown to be affected by introversion and prejudice. Findings like those of Mark Schaller and Jonathan Haidt's teams justify the theoretical association between disgust, irrationality, and non-prosociality. Less obvious is that the relationship between the three is inferential (i.e., disgust → irrational → non-prosocial). That is, the idea that disgust leads necessarily to non-prosociality and it does so because it is irrational.

Already in 1999, Paul Rozin, Laura Lowery, Soumio Imada, and Jonathan Haidt restricted the domain into which disgust operates to divinity and sanctity codes. They derived this conclusion from finding that contempt, anger, and disgust reflected the three moral codes suggested by the anthropologist Richard Shweder and collaborators (i.e., community, autonomy, and divinity). With the Moral Foundations Theory (MFT), Johnathan Haidt and others (Graham et al. 2011, Haidt 2012) developed a more comprehensive taxonomy of the main five intuitive moral antinomies (i.e., care/harm, fairness/cheating, loyalty/betrayal, authority/subversion, sanctity/degradation) derived by specific adaptive challenges and associated with activation of different emotions. Disgust turned out to be distinctively associated with judgments of purity, and specifically to those concerning

the body (flesh, genitals, and waste matters like urine, excrements, blood, sweat, vomit, semen, push, etc.) and to bodily taboos (e.g., relating to sex, reproduction, nutrition). Moral conduct encouraged by these intuitions includes temperance, chastity, piety, cleanliness, a series of attitudes promoted by secular religions, which have interpreted the body as a sacred container of the soul and a God's property, and thus have given to purity a spiritual connotation.

3. The refusal of moral disgust

Research associated disgust with certain ethical or sociopolitical attitudes that many scholars find questionable, i.e. conservative attitudes³. The link disgust-conservatism is sometimes explicit and conscious, but in many circumstances, it may come unconsciously and consequentially be more insidious.

In the bioethical debate, disgust has been linked to technophobia, namely to morally conservative attitudes (i.e., dislikes) towards novel biotechnologies such as GM foods, cloning, stem cells, gene therapy, brain enhancement, nuclear energy, vaccinations, etc. The bioethicist Arthur Caplan coined the expression "Yuck! Factor" (i.e., the exclamation of disgust) to characterize the underlying trigger of technophobic sentiments, which he identifies in rejecting fearsome and repugnant things (which usually also coincide with unfamiliar things) (see Schmidt 2008). John Harris (2007), discussing the issue of human enhancement through artificial means (such as gene therapy or brain interventions) claims: «when new technologies are announced, the first reaction is often either 'wow – this is amazing!' or 'yuck – this is sick!'» (p. 4). A list of potential cognitive biases (e.g., status quo, risk aversion, loss aversion, omission aversion, scope sensitivity, and appeal to nature) intervene at the onset of technophobic judgments of this kind (Caviola et al. 2014).

Opinion polls conducted regularly on the European population (e.g., Eurobarometer 2010), for instance, confirmed that moral unacceptability of biotech correlates with an increase in perceived risk, judged uselessness, feelings of unease, and unfamiliarity. A popular

³ I am aware that the labels 'liberal' vs. 'conservative' values, especially when used in association with left-right political orientation, may apply differently outside the U.S., where this debate originated. Another issue is that of hybrid positions.

argument among opponents of biotech, which justifies these epistemic interactions, is 'appeal to nature' (i.e., «natural is good, whereas artificial is bad») (see Eurobarometer 2010), an argument that is very much associated with disgust feelings towards novelties. It must be noticed that, on particular technologies, such as cloning in food or GM foods compared to nanotechnology, rising levels of familiarity seemed not to decrease unease and concern (Eurobarometer 2010, 84). The moral intolerability of modified food seemed to be highly correlated to the belief that, differently from other technologies (gene therapy, nanotech, etc.), modified food is risky and not worth the risk.

Not all bio-conservatives ignore this link between their beliefs or attitudes and disgust, but some advocate explicitly to this emotion as a «wise» guide for their moral views. For example, a major proponent of «the wisdom of repugnance» against human cloning and stem cell research is the neocon Leon Kass (1998). Another is the neurobiologist Steven Rose who, when opposing doping in sports and education, writes: «in the context of substances that interact directly with our bodily biochemistry, we feel a considerable unease reflected in custom and law» (Rose 2006, 74).

Disgust has also been associated with sociopolitical conservatism and, most importantly, with social prejudice. Political conservatives are more easily disgusted than liberals (Inbar et al. 2009a), a result that proved to be consistent in 121 countries beyond the U.S. (Inbar et al. 2012b). Moreover, heightened activity in the brain markers of disgust elicited by non-political disgusting images was used to predict whether someone is conservative (Ahn et al. 2014). A meta-analysis of 24 studies found that social and religious conservatism (but less political conservatism) can be strongly predicted from BIS strength (i.e., possessing a highly sensitive Behavioral Immune System, identified by thoughts of contamination, disease-avoidance, and disgust) (Terrizzi et al. 2013).

In terms of social prejudice, disgust makes not only people moralize in the sexual sphere (Helzer and Pizarro, 2011), but it correlates with homophobia (Inbar et al. 2009b, Inbar et al. 2012a), with ethnocentrism and xenophobia (Navarrete and Fesslet 2006), it increases prejudices towards the obese (Vartarian 2010), or towards mental health patients (Dawydiak et al. 2020).

Disgust possesses a communicative function. Political or social conservatives sometimes appeal explicitly to disgust to spur their audience. In 2012, in an escalation of attacks over animal rights during the presidential campaign, the Republican candidate Mitt Romney ridiculed Barack Obama for eating dog meat when he lived in Indonesia as a child. The Republicans recollected the anecdote from Obama's memories book *Dreams From My Father* and then spread it out on Twitter through the evocative hashtag #ObamaDogRecipes. Disgust was also used in Donald Trump's presidential campaign in 2016 (Richardson 2017). However, in political campaigns, it does not seem that the goal of the disgusting language is made explicit in every case, but it is used in a persuasive or manipulative way. Different cultures in history have shown homophobic attitudes by employing disgusting jargon to describe hermaphrodites, homosexuals, transgenders, queers, intersexuals, and asexuals (see Nussbaum 2010). The same can be said of disgusting terminology used to label black people, immigrants, people from other cultures, obese persons, clochards, disabled, etc. We have recently seen how during the COVID-19 pandemic, which originated in China and then spread out rapidly from country to country, xenophobic attitudes, and expressions towards foreigners (with more emphasis on Asian communities) were exacerbated.

4. How far are we justified in condemning disgust?

Emotions have at least four aspects that make them controversial candidates for originating reliable moral choices – even if defining 'reliability' in morality constitutes another disputed issue. Firstly, one might not be aware of what elicited the emotion, and often we are not. Cases of misattribution of emotions are well-known in the psychological literature (see Schacter and Singer 1962, Dutton and Aron 1974, Cantor et al. 1975). Secondly, emotions are hardly controlled by volition. Thirdly, it is very difficult to self-induce emotions on purpose. Fourthly, they can be easily manipulated by others. In sum, mere emotional choices seem to lack what has been traditionally considered a fundamental internal criterion for ethical actions, which is agential 'control' – even if nowadays a neuroscientific perspective may include more nuanced views about what notion of control is acceptable (see Sirgiovanni 2019).

Consequentially, a general trend in the literature on emotions and morality has been to classify emotions as more or less ‘moral’ according to an external criterion: whether they are (or are not) found to be associated with pro-social behavior. This has made some emotions more suitable to be labeled as properly ‘moral’, i.e., pro-social (e.g., happiness, e.g. Aknin et al. 2011, guilt, e.g. Tangney et al. 2007, elevation, e.g. Starks et al. 2019). An emblematic example of the alternative case – that of an alleged ‘anti-social’⁴ or ‘immoral’ emotion – is moral disgust. Hence, are we justified to conclude that disgust is *tout-court* an antisocial emotion?

To start, one might wonder if the mere link disgust-conservatism can account for the antisociality of disgust. As Jonathan Haidt himself and other exponents came to notice (see Duarte et al. 2014), most contenders of disgust are liberal and progressive thinkers, and they might be biased or prejudiced against conservative values or claims. There is nothing wrong with being a liberal or a libertarian, and I am part of the team myself (see Corbellini, Sirgiovanni 2015). However, the difference stands in condemning the emotion because of its negative outcomes (e.g., prejudice), and not doing it just because it is merely linked to positions we disagree with (e.g., monogamy, virginity, etc.). One might suggest that, at the end of the day, conservative purity judgments express bigotry or mental closure, and so they lead to negative social outcomes. On the other side, conservatives might interpret this argument as a slippery slope pushed by the liberal or progressive narrative since they believe that their purity values produce positive social outcomes.

Moreover, is it always true that disgust is a ‘conservative’ emotion? Overall, it seems that disgust can refer to liberal or libertarian causes as well. Disgust is shown to be related to vegetarianism (Rozin et al. 1997), or animal rights in general, anti-smoking bans (this is rather an anti-libertarian position) (Rozin and Singh 1999), environmentalist campaigns (e.g. disgust towards pollution, or environmental destruction, see Frimer et al. 2015) and healthy nutrition. Furthermore, disgust is elicited in cases of theft and fraud (Wheatley,

⁴ I am using the term ‘anti-social’ to indicate ‘non pro-social’, alias something producing negative social outcomes. I am not referring to any specific trait related to the diagnosis of antisocial personality disorder.

Haidt 2005), against sexism and rape (e.g., the *Me Too* campaign), pedophilia (e.g., the Epstein case), torture and brutal murders (serial killers, cannibals, etc.), and evil character (Giner-Sorolla, Chapman 2017). Disgust may emerge when we judge cheating, dishonesty, lying, ethnic persecution, homophobia, and homophobic persecution (e.g., Sarah Hegazi's case), racism (e.g., the protests that followed George Floyd's case) (see also Clark, Fessler 2015, for a discussion on these forms). US Democrats have shown expressions of disgust towards President Donald Trump's policies on social media. Years ago, on similar grounds, Dan Kahan (1999) had proposed a «progressive appropriation of disgust».

The least sensitive to disgust seem to be libertarians (Iyer et al. 2012), who are also the least empathetic and the most aggressive to autonomy infringements. Libertarians share «opposition to forcing any particular moral code upon others» (ibid., 2), thus they defend individualism, freedom, and autonomy. Libertarians, though, join mixed positions about economic and social issues, especially if we look at them through a liberal/conservative lens (e.g., they are liberal about sex or drug issues, but conservative upon free-market regulations and other issues). They controversially constitute a clear-cut group for research on disgust.

A group of researchers, among which Joshua Tybur, examined a multicultural sample from six different countries (Belgium, China, Netherlands, Japan, UK, and the USA) (Van Leeuwen et al. 2017). They found that conservatism did not account for the link between sensitivity to each disgust type (i.e., pathogen, sexual and moral), as identified by Tybur's Three-Domain Disgust scale (TDD, see Tybur et al. 2009), and specific moral foundations. In short, independently from the participants being liberals or conservatives, moral disgust was strongly linked to fairness/reciprocity (a 'liberal' foundation) and sexual disgust to purity/sanctity (a 'conservative' foundation). This may account for why the effect that transient disgust has on moralization has been shown also in non-purity cases, such as falsifying a resume or having an evil character (see Chapman, Anderson 2014, Landy, Goodwin 2015a, Landy, Goodwin 2015b, Schnall et al. 2015, Giner-Sorolla, Chapman 2017).

More recently, it emerged that when investigating pathogen and sexual disgust separately, only sexual disgust seemed to be predictive

of voting for the Republican Donald Trump in the 2016 elections, rather than voting for the Democratic Hilary Clinton or the Libertarian candidate Gary Johnson (Billingsley et al. 2018)⁵. This is an interesting finding, especially because this distinction between the effects of pathogen/sexual disgust might provide a partial hypothesis of why many conservatives were against mask-wearing during the coronavirus pandemic. Contrary to what was predicted by the common view, conservatives did not show to be more sensitive to pathogen disgust on this occasion while liberals did. Other relevant factors could be that asymptomatic COVID-19 cases show no clear signs of infectiousness and that all over the world right-wing politicians have embraced conspiracy beliefs about the pandemic (that is, as an influence of an *in-group* bias).

In recent theoretical work, Joshua Tybur, Catherine Molho, and Daniel Balliet (2018) suggested distinguishing ‘moralized disgust’ and ‘disgusting immorality’. Instances of moralized disgust would include «bestiality, cannibalism, homosexuality, pedophilia, and consuming tabooed foods», where (pathogen or sexual) «disgust is the *reason* why a behavior is considered to be morally wrong», or still «the disgust is elicited by the to-be-condemned behavior» (Tybur et al. 2018, 16). Tybur and colleagues contest that reporting verbally to be disgusted by actions that benefit someone at the expense of others (e.g., lying, stealing, cheating), or even showing disgusted facial expressions towards these actions (see also the work by Yoder et al. 2016), is a form of genuine disgust. They believe that in this case, even if people may feel similar sensations, disgust is a «metaphor» and should be called ‘disgusting immorality’. They argue that, in these situations, the violations do not motivate avoidance but indirect aggression (e.g. negative gossip) to recruit others to join the condemnation, and that so-called disgust does not differentiate from anger.

This is, however, a hypothesis that needs to be tested empirically, especially if one conflates ‘disgusting immorality’ with fairness and then infers that this is what liberals do more, while one identifies ‘moralized disgust’ with purity, a more conservative attitude (see Graham et al. 2009). One might not exclude that liberal inclinations

⁵ Hanna and Sinnott-Armstrong (2018) present the differences between Rozin and Tybur’s models and reciprocal critiques.

can also belong to moralized disgust (e.g., sexism, child abuse, pedophilia, rape, etc.). Another viable option would be to argue that purity/sanctity has to be conceived in a broader sense, more generally as a foundation moralizing ‘crimes against nature’ (Seidel, Prinz 2013), a definition that may leave room also for liberal stances, e.g. against environmental deflagration (see Frimer et al. 2015), animal torture, junk-food consumption, etc.

Moreover, the justifications given by the authors against the genuineness of so-called ‘disgusting immorality’ seem disputable. Isn’t negative gossip a strategy to convince others of excluding someone from social interchanges (Feinberg et al. 2014), hence a form of (maybe indirect) social avoidance? The fact that ‘disgusting immorality’ is a metaphor contrasts with studies (e.g. Schaich Borg et al. 2008, referenced by Tybur et al. 2009) confirming that non-sexual immoral acts (e.g. killing your child’s sister, or burglarizing your sister’s home) activate neural areas of disgust (see also Chapman, Anderson 2012). Besides, why should the presence of anger by itself discount the role of disgust?

According to the philosopher Joshua May, «a strong disgust response to a moral violation typically follows only if one already deems it a moral violation in the first place» (May 2018, 158). May believes that disgust works as a reinforcement when the audience is already sharing those beliefs («greater *polarization*, not *persuasion*» (ibid., 160), italics in the original), and it is incapable of making people *change* their minds, especially concerning political orientation. For example, seeing repellent images of aborted fetuses does not affect the moral beliefs of people who are ‘pro-choice’, but it seems to slightly amplify the beliefs of abortion opponents. May discusses some evidence that presenting purity-related information to conservatives may persuade them in favor of environmental causes (a liberal interest), but he argues that disgust worked only «when it was *integrated* with information that conservatives took to be particularly relevant» from their perspective (ibid., 162, italics in the original).

Recent studies conducted in Germany and the U.S. confirmed that the generalizability of the disgust-conservatism correlation is in fact content-dependent (Elad-Strenger et al. 2020). As the authors of the studies noticed, the link disgust-conservatism is usually measured through specific stimuli (i.e., elicitors in the contamination/core

domains). Some disgust measures (e.g., Disgust Scale – DS, by Haidt et al. 1994) contain – and most importantly, were validated through – socio-politically loaded items (i.e., homosexuality). Since the other items of the scales are likely to show common variance with the sociopolitical ones, even removing these items (as in DS-Revised, by Olatunji et al. 2007) leaves open the possibility that the whole scale might be socio-politically biased (this is a critique made also by Tybur et al. 2009 to Haidt and colleagues' DS). When participants were interrogated about liberal elicitors of disgust (e.g., environmental pollution, animal abuse, tax evasion, nationalistic symbols), conservative elicitors (e.g., drug use, homeless people, homosexuality), and politically neutral elicitors (e.g., seeing the decapitated head of a dead lion hanging on someone's wall, drinking from the common cup in church), results came out differently than predicted by past literature. In general, conservatives were not found to be more sensitive to disgust than liberals, but each political side was positively associated with its own specific set of disgust elicitors and negatively associated with the set of the other political side. Interestingly enough, considering the argument made by Tybur and colleagues (2018) about conflicting disgust and anger, we should mention that these results were confirmed also when controlling for anger responses. The conclusion of the authors was simply that disgust elicitors «serve the basis for the creation of norms aimed at minimizing exposure to these elicitors» (Elad-Strenger et al. 2020, 14). Most experiments have been designed with sexual scenarios, as rapidly connected to purity, but sex-related disgust elicitors tend to activate most conservative judgments (if we exclude some bipartisan elicitors like, for example, child abuse, or other more liberal such as sexism or rape). One may suppose that this design initially moved the needle towards the conservative side and perpetrated this generalization.

Another interesting hypothesis concerns the strong interplay between purity moralization and socio-economic status (SES), rather than sociopolitical ideology. Compared to upper SES individuals, lower SES individuals tend to moralize purity violations more severely, while they are not concerned about justice and harm/care (Haidt et al. 1993, Horberg et al. 2009). Remarkably, SES was shown to be unrelated to state or trait disgust (Horberg et al. 2009), but more work is needed to clarify this interaction with purity, especially if we con-

sider that ignoring SES might bias conclusions about conservatism-purity in lower SES samples.

Eleanor Hanna and Walter Sinnott-Armstrong (2018) suggested that disgust originates when situations do not meet our expectations (they call it TTM, 'threat to meaning'). The two authors would need to justify what makes disgust differ from other emotions (e.g., fear, anxiety, wonder) that are elicited in situations of epistemic uncertainty (e.g., thunder in the sky, an uproar, seeing a chimera, etc.). Their hypothesis, however, leaves room for a liberal defense of disgust. As said above, disgust motivates distancing from contexts, actions, persons one feels deplorable even from a liberal viewpoint, and many liberal disgust-related issues pass the 'prosociality test' (environmental issues, respect for other species, anti-racism, anti-homophobia, etc.). If a link between prosocial goals and disgust can be traced, might disgust judgments sound less 'dumb' to liberal thinkers?

Again, it seems that (presumably unintentional) ideological grounds have paved the way for a rejection of disgust as inconsistent. Steve Guglielmo (2018) criticized Jonathan Haidt's team who discarded both the justifications of harm and purity provided by the study participants to their morally disgusting stories (Haidt et al. 2001). Beyond traditional moral theory, which divided morality into harm and fairness, Haidt's Moral Foundations Theory (MFT) assumes that purity, the domain under which disgust is subsumed, is a separate moral foundation, not simply ascribable to harm – and this because, for example, there are purity violations that are harmless (e.g., masturbation). Then – Guglielmo says – at least the judgments of purity given by some subjects should have been held consistent. Following MFT, the unreasonable judgments were judgments of harm, because the cases presented in the study were actually harmless (e.g., the incest case of Julie and Mark, the two siblings who consent to have protected sex). The fact that disgust leads to judgments that are the expression of a conservative foundation such as purity cannot be *per se* a reason of inconsistency or irrationality. Either one should provide an argument for why or when purity is inconsistent or irrational, or one should abandon MFT.

Tybur and colleagues (2009) proposed that pathogen disgust evolved to protect from bodily harm, sexual disgust to protect from reproductively costly mates and offspring harm, and moral disgust

evolved to protect us from others' antisocial actions producing costs on one's social group. Avoiding wearing Hitler's sweater might respond to the latter social purpose (avoiding to be stigmatized as a neo-Nazi), so – contrarily to what suggested by Rozin – it would not be that unreasoned if interpreted in an evolutionary framework. We might only be unconscious, as it happens with most physiological processes, of the select-effect function of this emotion.

That disgust can be associated with liberal ideology is not a sufficient reason to state its rationality or pro-sociality, though. Politically oriented liberals can show forms of antisocial prejudice, such as towards obese persons, or they can be irrational and antisocial by expressing resistance to vaccinations (Clifford, Wendell 2016) or biotech in general. Hence, also liberal disgust may have negative effects. There are also those who, like Laura Niemi (2018), argue that disgust associated with sexual assault, especially the feeling of dirtiness, may be responsible for socially labeling and traumatizing the victims of such assaults. Moreover, as Nesse and Schaller suggested, disgust hypersensitivity produces many false positives. This may accentuate certain forms of tribalism that are true of liberals as well. Besides, the intensity of the experience of disgust is another relevant issue. Excessive emotions are often considered a negative trait and a symptom of psychopathology. Too much anger can turn into violence, too much disgust can result in social isolation.

5. Conclusion

The association disgust-moralization has stimulated prolific research and a thought-provoking debate. Most scholars have provided empirical evidence to support the normative rejection of disgust. Disgust was shown to be irrational and antisocial because it was linked to conservative attitudes and prejudice. I have argued that moral disgust can be rational or irrational, pro-social or anti-social, liberal or conservative, depending on the eliciting contexts and that such case-by-case conclusions rely on additional meta-ethical premises. Disgust is constitutive of specific moral judgments (Prinz 2007), judgments that may go beyond a narrow concept of purity and that, depending on the context, may have negative or positive social outcomes. It rather seems that an extensive condemnation or rejection of this emotion is moved by – presumably unintentional – ideological reasons. It

is too simplistic to assume that there are virtuous vs. vicious emotions and this may end up obscuring relevant details for future empirical and theoretical research.

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