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VALUE DISGUST: APPRECIATING STENCH'S ROLE IN
ATTENTION, RETENTION AND DECEPTION

Abstract

Philosophers, moral psychologists and neuroscientists have written plenty about disgust as it concerns foul actions, revolting images and unsavory tastes. Far less has been written about stinky delicacies. Disgusting odours are typically treated as violations whose visceral reactions to danger prompt our protective recoil. I term this 'basic disgust'. No matter how repulsive, meals rarely emit harmful aromas, even for people with particular food allergies. Allergic eaters must rely on labels. Moreover, neither taste nor smell is a reliable indicator of food safety, since most deadly toxins are flavorless. Food repulsions thus defy evolutionary explanations typical of basic disgust, so perhaps they are exemplary of 'moderate disgust', such that particular food smells disgust some people, somewhere, sometimes. Even if noxious dishes repel (basic disgust) or people find overcoming food aversions difficult (moderate disgust), neither approach accounts for the way innocuous stench attracts attention, frames perception, stage deceptions, signal values, enhance retention, boost concentration and accelerate task completion. Inspired by the Disgusting Food Museum's scheme to prompt visitors to adopt new values, I develop *value disgust*, which considers disgust value-driven and subject to perceptual learning. In other words, negative reactions to stinky delicacies are *dispositional*. As identification improves, we feel less disgust. To develop value disgust, which teases out harmless stench's 'superpowers', I begin by describing how disgust compounds smell's already complex properties. I next review philosophical accounts of disgusting smells, then survey the Disgusting Food Museum's surfeit of value-driven results, articulate value disgust and summarise several experiments that offer corroborating evidence.

Introduction

Philosophers, moral psychologists and neuroscientists have written plenty about disgust as it concerns foul actions, revolting images and unsavory tastes.¹ Far less has been written about stinky delicacies. Disgusting odours are typically treated as violations whose visceral reactions to danger prompt our protective recoil.² I term this 'basic disgust'. No matter how repulsive, meals rarely emit harmful aromas, even for people with particular food allergies. Allergic eaters must rely on labels. Moreover, neither taste nor smell is a reliable indicator of food safety, since most deadly toxins are flavorless. Food repulsions thus defy evolutionary explanations typical of basic disgust,³ so perhaps they are exemplary of 'moderate disgust', such that particular food smells disgust some people, somewhere, sometimes. Even if noxious dishes repel (basic disgust) or people find overcoming food aversions difficult (moderate disgust), neither approach accounts for the way innocuous stench attracts attention, frames perception, stage deceptions, signal values, enhance retention, boost concentration and accelerate task completion. Inspired by the Disgusting Food Museum's scheme to prompt visitors to adopt new values, I develop *value disgust*, which considers disgust value-driven and subject to perceptual learning. In other words, negative reactions to stinky delicacies are *dispositional*. As identification improves, we feel less disgust. To develop value disgust, which teases out harmless stench's 'superpowers', I begin by describing how disgust compounds smell's already complex properties. I next review philosophical accounts of disgusting smells, then survey the Disgusting Food Museum's surfeit of value-driven results, articulate value disgust and summarise several experiments that offer corroborating evidence.

The 'yuck factor'

I use disgust here to describe smells that ordinarily repel. Perhaps the literature infrequently discusses smelly comestibles because they swiftly deflect witnesses. While cooks remain immune to their fumes, passersby drawn against their will to such untenable smells complain bitterly. Aromas fill the air, circulate and cling to new things or join extant smells to become something else, such as the scent "smells like the bottom of my mother's purse",⁴ which is a *mélange de trois* of cigarettes, leather and perfume. Moreover, body odours linger long after cigarettes smoked, garlicky sauces eaten, coffees drunk, beers consumed,

¹ Haidt 2001, Herz 2012, Korsmeyer 2011, Strohminger, Kumar 2018 and Plakias 2019.

² Korsmeyer 2011: 119.

³ Ivi: 25.

⁴ Supermasochist Bob Flanagan coined this phrase.

wines imbibed, breath mints chewed, fires extinguished and running clothes washed. Cautionary tales drive the booming air freshener market, as well as perfume applications destined to mask body odours and unmask potential romantic partners.

Disgust is particularly interesting because, according to Charles Spence, it is the only one of six basic emotions (plus sadness, happiness, fear, surprise and anger) whose contents must be learned.⁵ The 'yuck factor' thus tends to influence younger people more than older people, who have since learned when to distrust disgust, since neither detection nor reaction proves foolproof. For example, some people are particularly sensitive to garlic breath, yet studies show that men who eat garlic smell more attractive, since it apparently destroys armpit-odour causing bacteria, which makes the body's overall smell less intense and therefore more attractive and pleasant.⁶ Babies, whose mothers eat raw garlic, tend to breastfeed longer. Although some scientists claim that garlicky milk *signals* crushed garlic's health benefits, such as improved immune system functioning, reduced serum cholesterol and lowered hypertension,⁷ research described below suggests that stimulants like garlic lessen distractions, prompting us to stay on task. Despite being hard-wired for disgust, malodours are subject to hedonic shifts (changing dislikes into likes, and vice versa) arising as a result of life's rich experiences. We thus both learn and unlearn disgust's contents.

Disgust only compounds smell's already complicated properties. As compared to sight and sound, there are conceivably many more distinguishable odours than colours or tones. Moreover, smell is highly complicated given that "colour perception is mediated by differential activation of three types of receptors whereas olfactory perception is mediated by differential activation of around 400 different types of receptors and the possible combinations of 400 far exceed the possible combinations of three".⁸ According to Charlie Greer, olfaction "is the only central nervous system, mind you, where populations of sensory neurons die on a regular basis and are replaced by new populations of sensory neurons – who then correctly send out their axon to the right part of the olfactory bulb to converge with other similar axons".⁹ Ann-Sophie Barwich adds, "the fact that the system rewires regularly shapes how it interacts with an irregular, unpredictable stimulus".¹⁰ Apparently, olfaction occurs independently of consciousness, absent attention and without subjective awareness.

As Young *et al.* point out, "an increased linguistic repertoire for olfactory experiences and the acquisition of new linguistic tags to refer to them enhances the way we are consciously aware of olfactory stimuli, but not the underlying ability to discriminate among olfactory stimuli".¹¹ Olofsson *et al.* found that "decisions regarding odour-object identity were faster than decisions regarding odour valence or edibility, but slower than detection",¹² since valence and edibility evaluations require more information. Hence, perceptual acuity improves with perceptual learning or maturation, "which results in an enhanced or more fine-grained space of discriminable stimuli, and a correspondingly enlarged or more fine-grained space of mental qualities".¹³

Contrary to philosophers who consider disgust basic or moderate, this paper treats olfactory perception as a rather complex process, whose judgements are subject to cognitive processing, and thus depend on the imagination's capacity to assign the appropriate linguistic tag to enrich our understanding. Identification tends to render disagreeable food smells, whether curries, canned tuna or Fromage de Herve, tolerable. But as Barry Smith notes, "we do not just smell odours, we learn them in a context where we experience the properties of their sources".¹⁴ Out of context, we not only perceive smells differently, but familiar ones suddenly seem unrecognisable. I thus suspect that disgust functions more like an alarm that sounds when our noses detect unidentifiable smells.

Philosophical accounts of disgusting smells

That philosophers have tended to ignore smell is often blamed on Immanuel Kant, who famously claimed that smell has nothing to do with a rose's beauty, since its fleeting scent wows some, but gives others headaches. Apparently, sight's great advantage is that we can look away, ensuring that eyesores don't become 'eyeaches'. Far more pervasive, "smell is contrary to freedom and less sociable than taste",¹⁵ so *smellsores* are inveterate aesthetic nuisances. Kant even pondered dispensing with smell altogether.

Which organic sense is the most ungrateful and also seems to be the most dispensable? The sense of smell. It does not pay to cultivate it or refine it all in order to enjoy; for there are more disgusting objects than pleasant ones (especially in crowded places), and

⁵ Spence 2017.

⁶ Burniss 2015.

⁷ *Ibidem.*

⁸ Young *et al.* 2014: 5.

⁹ Barwich 2020: 179.

¹⁰ *Ibidem.*

¹¹ Young *et al.* 2014: 12.

¹² Olofsson, Bowman, Gottfried 2013: 1205.

¹³ Young *et al.* 2014: 3.

¹⁴ Smith 2017: 794.

¹⁵ Kant 2006: 50.

even when we come across something fragrant, the pleasure coming from the sense of smell is always fleeting and transient.¹⁶

Kant considered the idea from smell and taste “more a representation of *enjoyment*, than of cognition of the external object”.¹⁷ As Kevin Sweeney explains, he believed that “[smell’s] immediate hedonic effect occurs without benefit of input from our higher cognitive faculties. No acts of the imagination or the understanding are involved in this sensory liking or disliking”.¹⁸

Kant considered smell and taste more subjective than objective, since they neither arouse agreement nor afford communicability.¹⁹ Although he distinguished smell as *foretaste*, he ranked taste superior to smell, since it promotes sociability and judges the wholesomeness of food *beforehand* (presumably, what we call ‘gut feelings’).²⁰ Since he never ventured far from Königsberg, he may not have known foreign food smells. Consider the Japanese delicacy *natto*, a traditional breakfast ‘superfood’ that apparently smells “like the marriage of ammonia and a tire fire”, yet 127.9 million Japanese consume 14 billion pounds of it annually (135 grams daily).²¹ Had he heard of this gnarly delight, it would only confirm his view that smells arouse sensory judgements, or reflective judgements regarding the agreeable; though not aesthetical judgements of taste, whose attribution of beauty is universally communicable. Hardly a free beauty, the appellation ‘superfood’ presupposes a concept of its purpose.

In the opening pages of Carolyn Korsmeyer’s *Savoring Disgust*, she distinguishes two philosophical approaches, what I earlier termed basic and moderate disgust. The first emphasises emotions’ physical, reactive character and thus speculates on the “roles emotions play – or once played – in the survival of the species”,²² making disgust fairly constant across the species. By contrast, others view the emotion’s role in the social order as “connect[ing] affective dispositions with patterns of learned behavior that reflect and perpetuate ideologies, moral codes, and religious precepts”.²³ If moderate disgust is apt, then fermented salsiva, decomposed shark and maggot-ridden cheese prove desirable because “to a very large measure what is disgusting, or not, is in the mind of the beholder”.²⁴

¹⁶ *Ivi*: 50–51.

¹⁷ *Ivi*: 46.

¹⁸ Sweeney 2012: 61.

¹⁹ Kant 2006: 46, 51.

²⁰ *Ivi*: 51.

²¹ Herz 2012: 2.

²² Korsmeyer 2011: 15.

²³ *Ibidem*.

²⁴ Herz 2012: 6.

In *That’s Disgusting: Unraveling the Mysteries of Repulsion*, Rachel Herz adds, “the primary way that we come to have a position or belief about something is through cultural learning”.²⁵ Since disgust is one of six emotions, it’s hardly surprising that both approaches center on emotion. What’s odd, however, is that they characterise disgust as *fait accompli*, thus overlooking its role as an adversarial superpower. Overcoming disgust is not only a triumph, but it engenders transformative experiences.

Korsmeyer’s notion of ‘aesthetic disgust’ characterises disgust as heterogeneous (variety, degrees, shades and blends)²⁶ and accommodates hedonic shifts. She notes how “disgust loses its aversive features and is transformed into pleasure, though there may be a residue of what once was disgusting that lingers both in taste sensation and in meaning”.²⁷ In terms of disgusting foods, she highlights sight and (dis)taste more than smell, though she does make a claim that especially relates to smell. She observes,

[W]hen the disgusting exerts an appeal, it is an invitation to discover that something is really not an object of disgust at all. In other words, perhaps the appeal of disgust is always – or at least typically – toward an object that fails to prompt that emotion by the time that it comes to be savored.²⁸

It thus seems that the act of eating something stinky renders it no longer (or at least less) disgusting, unless of course we ate it on a dare or by accident. Korsmeyer also remarks how the emotion “labeled ‘disgust’ – feels markedly different when aroused in different contexts. And the differences can be profound”.²⁹

Philosophers have worried that smell is just too subjective: we can’t discern whether our feelings reflect a particular smell or associations triggered by said smells. As Korsmeyer puts it, Roger Scruton denied that we “smell-in”, the way we “see-in”,³⁰ since we cannot distinguish “between what we experience *in* the object and what the object merely calls to mind”.³¹ In light of the cognitive penetrability hypothesis, which claims that beliefs, desires and emotions influence subjects’ perceptual contents, vision is hardly immune to thoughts. Today’s olfactory researchers use SCAPE microscopes to record single cells responding to

²⁵ *Ibidem*.

²⁶ Korsmeyer 2011: 137.

²⁷ *Ivi*: 87.

²⁸ *Ibidem*.

²⁹ *Ivi*: 97.

³⁰ Korsmeyer 2019: 364.

³¹ Scruton 2009: 121.

odours, making previously undetectable details increasingly measurable.³² Given smell's pervasiveness, context dependence and our capacity to unconsciously perceive it, 'smelling-in' will never be fool proof, but disgust will occur less frequently as acuity improves with age.

Alternatively, Colin McGinn calls disgust a "philosophical emotion – a result of high-level conceptualization. Babies and animals, not being philosophers, have no time for it, but cognitively mature adult humans cannot escape being philosophers – and disgust comes with the philosophical territory".³³ Having rejected both basic and moderate disgust, he proposes, "The disgustingness of a stimulus cannot be overridden by knowledge or belief or brute willpower [...]. Disgust is insulated from the rest of the psyche – an encapsulated module. [...] we cannot help *seeing* the world a certain way, no matter what our beliefs about it may be".³⁴ He appeals to Rozin, Haidt and McCauley's research that people find *plastic feces* and *sterilised roaches* disgusting. This outcome rather reflects cross-modal priming, such that thoughts of disgusting things cause feelings of disgust, or disgust's deceptiveness. A better test would be to ask philosophers to describe their disgust pangs, while handling plastic feces. When we notice litter in the forest, we feel a profound disgust for our species, yet we readily pick it up. Either way, the Disgusting Food Museum, which I next discuss, proffers an even better test.

A surfeit of value-driven results

My new found appreciation for stinky delicacies stems from my 2019 visit to the Disgusting Food Museum (DFM) in Malmö, SE, where eighty dishes from around the world are on display. Being a museum, sight plays a partial role in eliciting feelings of disgust, yet unidentifiable malodours predominate.³⁵ In fact, the signboard directing visitors to the entrance reflects smell's omnipresence: "So Close You Can (Almost) Smell It". While reading it, one suddenly gets a whiff of a ghastly scent that likely detracts potential visitors. In retrospect, this encounter serves as a litmus test to demarcate the merely curious who flee immediately from the truly adventurous who venture forth despite fair warning.

DFM co-founder Samuel West considers disgust a universal emotion, yet:

The foods that we find disgusting are not. What is delicious to one person can be revolting to another. [The] Disgusting Food Museum invites visitors to explore the world

of food and challenge their notions of what is and what isn't edible. Could changing our ideas of disgust help us embrace the environmentally sustainable foods of the future? [...] Adventurous visitors will appreciate the opportunity to smell and taste some of these notorious foods.³⁶

That stinky delicacies lack 'universal repel' invalidates basic disgust. Hardly 'gross-out' theatre, the DFM motivates visitors to experience the way values underlie feelings of disgust.

In an interview with Rachel Sugar, West explained that his aim for the DFM is to alter people's values, not their preferences. "If we can get cool people, the elite in a given society, to eat insects, then that would increase people's openness to trying insects",³⁷ which offer a more sustainable protein source. When the DFM succeeds, hedonic shifts arise as a result of well-articulated reasons and perceptual learning, a possibility McGinn denies. However, this outcome coheres with Rozin, Haidt and McCauley's earlier findings that those who chose a vegetarian lifestyle for moral or ecological reasons registered stronger disgust reactions to meat than did health-oriented vegetarians.³⁸ Moral values seem to trump practical concerns.

Given food's importance for demarcating and preserving cultural identities, as well as its ties to particular historical eras and natural environments, I was initially appalled by the DFM's framing so many national delicacies as 'disgusting'. I worried that such a pejorative term encourages 'othering' communities, reeks of 'exoticism' and condones negative stereotypes; problems already in play owing to Europe's colonial past and anti-immigrant present. In drawing attention to foreign food smells, I imagined this museum fanning the flames of Denmark and Sweden's already explosive far-right political parties, such as the Nordic Resistance Movement, which since 2015 has also been a Swedish political party.

My concern was not so farfetched. Describing things as disgusting has been shown to trigger biases against certain people, including immigrants, gays and liberal politicians; actions deemed illegal/illicit; or purchases deemed unwarranted. As Herz points out,

[U]nfamiliar aromas are associated with the unwanted invasion of the foreigners and thus are unwelcome and repugnant. Because of the uniquely potent link between smell and emotion, the visceral disgust a scent can provide cannot be easily overcome and the foreigners and their food [thus] become a stench to be eradicated.³⁹

³² Barwich 2020: 191.

³³ McGinn 2011: 58.

³⁴ *Iph*: 59.

³⁵ Smells are so strong that the 'admission ticket' is printed on a vomit bag, in case of need.

³⁶ West 2020.

³⁷ Sugar 2018.

³⁸ Rozin, Markwith, Stoess 1997: 71.

³⁹ Herz 2012: 8.

As it turns out, however, the DFM has a ‘silver lining’. Evidently, pumping out smells that prompt racist tropes stops people in their tracks and dissuades them from entering. Even its name conveys a core racist belief: “other people (though not me) eat disgusting foods”. People who hold such views are unlikely to consider the DFM remarkable. According to perception research, people tend to over-estimate soft sounds and dim lights,⁴⁰ so I imagine even the slightest odd smell overwhelming those for whom strange odours both confirm and aggravate said biases. This means that unfamiliar smells likely deter haters from venturing forth. Feeling repulsed, they would surely rebuff the requisite SEK185 (€18) entry fee. Alarming aromas simultaneously dissuade racists, yet lure adventurers through the door.

The DFM’s curatorial approach echoes what *Perils of Perception* author Bobby Duffy identifies as the six factors (simple, unexpected, concrete, credible, emotional and tells a story) needed to ensure a ‘new idea’ will stick. The museum’s rather straight-forward displays convey *simplicity*. Since most dishes are not widely known, they are so *unexpected* that those eliciting disgust prompt strong *emotions*. That we encounter real delicacies, not plastic replicas, makes them *concrete*. Carefully written labels that convey eaters’ reasons for preparing them are both *credible* and tell a *good story*.

It is well known that negative information “draws and holds our attention”,⁴¹ so framing its displays as disgusting achieves what the Awesome Sustenance Museum, Memorable Bites Museum or Astonishing Dishes Museum (fictional museums exhibiting identical displays, yet marketed positively) could not. In fact, the DFM ensures that astonishment exceeds disappointment. I imagine people arriving with a short list of foods they expect to find, such as Stilton cheese; so its line-up of even stinkier cheeses surprises. Unfortunately, the smells all blend together as one overarching stink bomb, making it impossible to parse scents. Fortunately, a tasting bar awaits the especially curious.

So how does the DFM challenge people’s natural inclination to reject putrid, rotten and uncomfortable food smells? Research shows that people consider themselves less prejudiced than others.⁴² If this is so, I imagine visitors who consider themselves open-minded trying extra hard not to reject or dismiss global culinary treats, despite the race-baiting smells. Discovering expected dishes such as stinky cheeses or fermenting herring in the context of a museum reinforces the “illusory truth effect”, such that people believe things in line with their existing understanding of the world.⁴³ Such moments engender confirmation bias, such

⁴⁰ Duffy 2019: 14.

⁴¹ Ivi: 117.

⁴² Ivi: 73.

⁴³ Ivi: 132.

that our findings fit our expectations, which reflect a balance of information and beliefs that typically influence our attitudes toward evidence and conviction.⁴⁴ The more confident we are that the museum has correctly assessed what counts as disgusting, the more seriously we engage its unusual entries.⁴⁵ We strangely let down our guard, which coheres with research showing how the mere whiff of a fart spray prompts people to adopt attitudes they ordinarily abhor.⁴⁶ That people eventually sample dishes previously deemed disgusting exemplifies disgust’s dispositional status and DFM’s success.

Were we served such dishes in a different context, say during a friend’s dinner party, we might have opposite reactions. We’ve all had that experience of not wanting to be rude, yet feeling quite oppressed nonetheless by fears aroused by suspicious dishes. In fact, Duffy notes that “we overestimate what we worry about and worry about what we overestimate”,⁴⁷ so suspicious dishes easily arouse anxieties. By contrast, “When we hear something for the second or third time, our brains respond faster to it and we attribute this ‘fluency’ as a sign that it is true”.⁴⁸ Although people tend to believe stories that sound familiar, visitors who take the time to study DFM displays end up modifying preconceptions and overcoming gut reactions. We learn who eats it, why they eat it and that its preparation reflects hundreds of years of *terroir* cultivation.

So long as people suffer an “illusory superiority bias”, they arrive as “nativists”, who believe that their native dishes smell best.⁴⁹ People rarely consider the foods they eat stinky, let alone disgusting.⁵⁰ And in many ways, this is DFM’s ‘teachable moment’, as Americans confront factory foods (Twinkies, root beer, molded Jello-O salad, Spam and Pop Tarts), while Swedes encounter *surströmming* (a canned fish dish), ranked by www.delish.com as the world’s second stinkiest food (after the Asian fruit durian).⁵¹ As each person discovers his/her culture’s delicacies amidst the museum’s overwhelming stench, we gain empathy for the way unusual foods elicit disgust.

The proverb ‘one man’s meat is another man’s poison’ suggests that preferences are entirely intersubjective. In other words, what people eat is guided more by ‘social practices’ than rational choice, let alone values. But in fact, this view is highly misleading, since people’s diets largely reflect available technologies (lo-

⁴⁴ Ivi: 155.

⁴⁵ Ivi: 40.

⁴⁶ Herz 2012: 191.

⁴⁷ Duffy 2019: 169.

⁴⁸ Ivi: 132.

⁴⁹ Ivi: 97.

⁵⁰ Herz 2012: xi.

⁵¹ Robbins 2011.

cal species, seed access and agricultural equipment) coupled with *terroir* (soil, terrain – elevation/slope –, climate – wind/rainfall –, agricultural traditions, horticultural skills, flora and fauna, distance from pollution, etc.). When people's meals are framed as environmental, they seem logical. And on this level, the DFM does an amazing job explaining why and how dishes originated. We soon realise that most delicacies closely track the environment and historical eras in which their tradition sprung up.

No wonder those who pass the initial litmus test and venture forward end up far less disgusted than anticipated. This result parallels Herz's experience as the "celebrity judge for the National Rotten Sneakers Contest in Montpelier, Vermont, an annual contest held since 1975",⁵² whose winning pair enters "The Hall of Fumes". When colleagues tried to dissuade her from sniffing teens' stinky footwear, she joked that she had "to get up-close and nose-personal" for her smell research. In assessing her hesitation, she writes,

I had psyched myself up to believe that it would be excruciating and the reality was weak by comparison. The fact that my thoughts enabled me to tolerate those mephitic sneakers made me realise that our mind has a very powerful influence on our perception and experience of disgust.⁵³

Both Herz's judging experience and DFM's popular tasting bar demonstrate disgust's adversarial role and transformative potential.

The value disgust approach

In light of West's quest to use disgust to shift elites' appetites, it's worth reviewing how this might work and whether this offers yet another way to explain foreign delicacies' repellent smells. Herz remarks that it's:

easier to make someone feel noticeably anxious than to make them feel particularly good. This isn't just my poor choice of happy-induction tactics; it's a widespread effect and the reason why most emotion experiments involve negative rather than positive mood. [...] the imbalance of bad over good is adaptive. Avoiding bad things gives us much more of a survival advantage than approaching good things does.⁵⁴

Disgust quiets our anxieties by drawing our attention to potential danger.

⁵² Herz 2012: ix.

⁵³ *Ivi*: x.

⁵⁴ *Ivi*: 109.

When we are more emotionally involved our attention is piqued and when we pay attention to scents we become more psychologically sensitive to them. For example, a potent way to make odours emotionally salient and make us pay more attention to them is to advise us that they are dangerous.⁵⁵

Alexandra Plakias argues that food ethics "protect us from foods embodying toxic values – values that threaten, not our physical health, but our ideological integrity and therefore our very identity".⁵⁶ This notion coheres with vegetarians registering stronger disgust feelings given their moral positions. Being vegetarian reflects values that inform their self-identities. By presenting information and offering samples, the DFM effectively quells anxieties, but it achieves this by reconceptualizing our disgust "in terms of properties that better reflect and further values [visitors] identify with",⁵⁷ such as sustainability, *terroir* or local habitat.

As Rozin, Haidt and McCauley explain, values drive social practices.

Moralisation converts preferences into values and in doing so influences cross-generational transmission (because values are passed more effectively in families than are preferences), increases the likelihood of internalization, invokes greater emotional response, and mobilises the support of governmental and other cultural institutions.⁵⁸

Since our values are rooted in our beliefs, it's hardly surprising that unfamiliar DFM smells trigger danger and *heighten* our attention, thus augmenting the very anxieties its exhibits aim to quell. And with so many delicacies to explore, cultural learning is expedited. People who perform tasks amidst foul odours work faster as if to hasten escape, yet their results are no less accurate.⁵⁹ If more DFMs open up, as West plans, their deploying the "yuck factor" will accelerate the adoption of new values.

One issue that remains under-explored is the connection between emotional encoding for disgust and our imagination, which facilitates scent and/or source identification, yet proves vulnerable to priming, as shown by the invigorating 'smell of money' experiment, during which participants counted either real money or images of money in the presence of tempting chocolate bars. Participants who counted actual cash not only ate way more chocolate, but they endured pain for significantly longer and were less likely to help others, as if money's aroma arouses self-absorption. According to Adrian Furnham, "Primes have an effect

⁵⁵ *Ivi*: 91.

⁵⁶ Plakias 2018: 198.

⁵⁷ *Ivi*: 198.

⁵⁸ Rozin, Markwith, Stoess 1997: 67.

⁵⁹ Herz 2005.

on beliefs and behaviours because they activate powerful associations”.⁶⁰ Unlike other emotions for which we have salience and/or concrete references, our imagination plays an outsized role when it’s needed to conjure up the appropriate linguistic tag.⁶¹ The repellent smell wafting outside the DFM is real, but until we read the signboard, we erroneously associate it with the restaurant next door.

With its slow, deliberating reasoned approach, the DFM demonstrates stinky delicacies’ alarmist ploys and poses good reasons to mistrust disgust. Not only does our imagination both spark and disarm reactions of disgust, but malodours facilitate retrieval and retention, thus rendering stench a potential learning tool. Apparently, putting a pencil between people’s teeth prevents them from making snarled-lip faces, which reduces their feelings of disgust when shown revolting images. This ‘grin and bare it’ approach may lessen visual transgressions, but unsavory smells are comparatively omnipresent. To demonstrate the way our values drive emotional responses associated with disgust, I next describe experiments that indicate that: unfamiliar smells attract our attention, unidentifiable familiar smells provoke associative thoughts, smell overrides our attention to sounds, certain scents boost concentration and feelings of disgust prime people to dispose of potentially disgusting objects.

A summary of related experiments

Attention/Distraction. An 1897 experiment indicates that people have long suspected aromas to attract our attention, lead us adrift and inevitably alter our plans, thus anticipating current olfactory research. It demonstrated scent’s capacity to distract listeners from attending to two ivory balls being dropped on an ebony plate at five-second intervals. In between drops, listeners sniffed a scent and then listened to determine whether the second ball was dropped from a higher or lower height. The researcher ranked each scent according to its having caused participants to get so wrapped up in smelling that they reported *wrong* answers. Initially, the researcher hypothesised that “an odour would distract when it was either (1) familiar, but [could] not be named, or 2) so familiar as to set up a vivid train of associated ideas” (a form of priming).⁶² Varying wildly from nose to nose, four sniffers (O, B, S and Dr. P) rated nitro-wurtzite, rye whiskey, tincture of arnica and oil of turpentine the most distracting, respectively, granting them distraction values of 1 (most distracting of 50 samples). Coffee, presumably a familiar smell, ranked 42, 45, 30 and 4, while ‘paregoric’,

⁶⁰ Furnham 2014: 251.

⁶¹ Nussbaum 2004: 14.

⁶² Birch 1897: 49.

a camphorated tincture of opium known for its anti-diarrheal and analgesic properties, ranked 2, 49, 11 and 38, respectively.

Stimulation. This experiment found that “least distraction or stimulation can be set up in two ways: by very familiar scents (attention on the sound) and by uncertainly familiar scents (attention tending away from the experiment and now held upon it)”.⁶³ Stimulating scents led “subjects to work better under distraction than under standard conditions”.⁶⁴ Female sniffers O and S found olive oil and rosemary least distracting, while B and Dr. P found turpentine and absolute alcohol least distracting.⁶⁵ Although garlic was not among the 50 samples, it likely has a high distraction value since it stimulates babies to nurse longer. Researchers have since found that disgusting smells, such as perspiration, *arouse* concentration, which could explain OCD sufferers’ heightened attention to danger and pregnant women’s smell sensitivities.

Identification. Since smells are name-sensitive, this experiment’s emphasis on identification makes it especially relevant. Replicating this experiment for negatively-valenced odours is likely to engender similar results. I imagine unfamiliar disgusting smells distracting *most* since unpleasant odours not only pique attention, but they trigger anxieties. Identification difficulties further distract when they prompt associations with disgusting things. When it comes to foreign cuisine, identification is impossible if the ingredients are unfamiliar. We wonder aloud ‘What’s that smell?’ in hopes that learning its name will neutralise it.

More recently, Herz’s

laboratory showed that just by calling a chemical mixture either “vomit” or “parmesan cheese” [they] not only could elicit totally different reactions to the scent – disgust or pleasure – but people wouldn’t believe that they were actually smelling the same odour. Smell is ambiguous and we can be misled to be disgusted by our noses.⁶⁶

Indicative of the way values drive disgust, Herz’s lab tested what would be required to undisgust a brand new sweater that presumably come in contact with dog poop, hepatitis and Hitler. While sterilizing the sweater erases the first two, “only Mother Theresa’s donning Hitler’s sweater could diminish its evilness, but [even] she couldn’t take the tarnish off completely”. Doing so requires burning, a smell tied to reducing evil to ashes, as in burning effigies

⁶³ Ivi: 54-55.

⁶⁴ Ivi: 53.

⁶⁵ Ivi: 52.

⁶⁶ Herz 2012: 55.

and witches.⁶⁷ That a burning smell prompts thoughts of overcoming evil and thus undisgusts this sweater demonstrates cognitive penetration's influence, whereby thoughts and imaginings overwhelm perceptual properties. This proves the role played by values, since our values inform cognition, thus modifying the sweater's affective valence.

Olfactory Memory. By combining sound and smell, the 1897 experiment highlighted smell's role in retention and retrieval. Although its takeaway message was the more familiar, or memorable the scent, the less distracting; it also shows that attending to smells readily overrides attending to sounds, since a scent distracts:

when it is familiar, but cannot be named and so 'bothers'; (2) when it is very familiar and so suggests scenes and events readily; (3) when it is totally unfamiliar and so piques the attention; and (4) when it is easily recognised and so sets up a general feeling of relief that the trial is over.⁶⁸

While easily retrieved scents tend to distract less, repellent scents not only distract us, which grabs our attention, but their retention rates are comparable to sight.⁶⁹ Consider nosewitnesses, whose sniffing of body odours (BO) to identify suspects is akin to eyewitnesses and sniffing dogs. Like eyewitnesses and earwitnesses, nosewitness accuracy decreases as lineup sizes increase, but it far exceeds chance rates.⁷⁰ Although Alho *et al.* recommend further studies, they conclude that "olfactory memory may turn out to be an interesting forensic tool, either in the identification of culprits or in the recollection of event details".⁷¹ In light of research published by Kærnekull *et al.*, they predict that "[o]dours that are unfamiliar (and non-identifiable by name as is the case with BOs) are typically more difficult to retrieve, but are forgotten at the same rate as familiar and identifiable odours".⁷²

Emotion Encoding. As compared to other mammals, human beings are surprisingly good at smelling.⁷³ "[S]pecies specialise in different scents that are

⁶⁷ *Ibidem.*

⁶⁸ Birch 1897: 50.

⁶⁹ Odour retention drops from 55% correct after 15 minutes to 25% after one week. Apparently, this resembles sight retention, which falls from 55% to 32% correct after 24 hours and sound, which declines from 50% after one week, 43 after two and 9% correct after three weeks (Alho *et al.* 2016: 35).

⁷⁰ That nosewitness accuracy rates exceed chance bears out as follows: 96% accuracy for 3 suspects (chance = 33%), 56% for 5 (chance = 20%) and 46% for 8 (chance = 12.5%). Ivi: 20.

⁷¹ Ivi: 40.

⁷² Kærnekull *et al.* 2015, Alho *et al.* 2016: 26.

⁷³ Zaraska 2017, McGann 2017, Handwerk 2017.

important to their lifestyles or ecological niches",⁷⁴ so we readily recognise fruit and flower odours and wounds (blood). Since Alho *et al.*'s 2015 experiment found nosewitnesses' success rate at identifying culprits to be greater for emotional crime videos than neutral ones,⁷⁵ it's odd that their 2016 experiment used body odour (BO) collected from 'healthy' males aged 18 to 28, which likely disgusts less than that of stressed-out, anxious culprits. Their earlier research found that "the emotional content of the videos during encoding boosted identification performance of the culprit",⁷⁶ which doesn't happen for eyewitness studies.⁷⁷ Emotion-encoded smells, such as a culprit's BO or a first-time parachuter's sweat likely pique nosewitness attentions because disgust is attention-seeking and fear tends to be contagious. "Smelling the body odour of stressed-out people ups our vigilance, while the odour of people who had just watched something disgusting makes our face twist in disgust".⁷⁸

Context Dependence. As noted earlier, smell is special since both perception and detection is context dependent. As Alison George points out,

With smell the meaning is based on context much more so than with vision [...]. A vomit smell in an alley beside a bar will immediately conjure up a mental picture of a disgusting source, but exactly the same aroma would evoke deliciousness in a fine restaurant.⁷⁹

As Herz details, "the scent of feces is only revolting once you've learned that feces means waste and it varies in pleasantness depending upon whose you think it is [...]. The context in which we encounter an odour is a further influence".⁸⁰

Moreover, smell "ties directly with [our] internal milieu, such that an invariant odourant elicits vastly disparate perception given different biological states, a phenomenon characterised as olfactory alliesthesia".⁸¹ In other words, food smells intensify for those experiencing hunger, fatigue, pregnancy, OCD and many other maladies. On the flip side, remedies such as 'smelling-bottles' and smelling salts containing volatiles made from ammonia, *assa foetida*, garlic,

⁷⁴ Handwerk 2017.

⁷⁵ Herz 2005.

⁷⁶ Alho *et al.* 2015.

⁷⁷ Alho *et al.* 2016: 37.

⁷⁸ Zaraska 2017.

⁷⁹ George 2012.

⁸⁰ Herz 2012: 54-55.

⁸¹ Cabanac 1971.

hartshorn, horseradish, camphor and myrrh were historically used to quiet anxiety and depression.⁸²

Priming. When compared to taste's distinct five kinds (what we sense when our nose is pinched), scents prove infinite, both in their range and their evocative capacities. Were the 1897 experiment's data analyzed for valence and the experiment repeated to test distraction by/attention to disgusting odours, we might find that coffee's low distraction value for Dr. P reflects his associating its aroma with the toilet, since drinking it sometimes causes him diarrhea, which also explains his familiarity with paregoric elixir. With the exception of turpentine and ammonium sulfide hidden among the list's edible, medicinal and household odours, it's difficult to know which scents actually stink.

A 2013 experiment showed that neutral odours initially perceived as neutral were later perceived as aversive and took longer to detect, following subjects' exposure to anxiety-provoking images chosen from the International Affective Picture Set.⁸³ The researchers found that "human olfactory processing is affectively charged long before an odorous molecule makes contact with the nose".⁸⁴ Depending on the odour, smells tend to dissipate rather rapidly (within twenty minutes). When an otherwise benign balsam, woodsy odour was categorised as hazardous, healthful, or an experimental standard, its intensity varied significantly. Participants reported that the dangerous scent actually got stronger with time, yet the latter two cases weakened after twenty minutes. When given a physical test, it turned out that those who reported it stronger no longer actually smelled it, though thoughts of it lingered. "This shows how our emotions, especially anxiety, can amplify our perceived sensation of odours, even though in reality we are no more and perhaps even less, sensitive to them than we were before the 'threat'".⁸⁵

Jennifer Lerner identified "the disgust-disposal" effect, such that the "yuck factor causes [us] to expel objects in close proximity, regardless of whether they are the cause of [our] disgust".⁸⁶ Apparently, even subconscious exposure to disgusting things induces an urge to dispose. Disgust primes people to buy less and pay less for purchases. Disgusting smells have been shown to prime people to reverse their views, such that fart sprays lead people to "feel less warmth towards homosexual men compared to participants in a non-smelly room" (regardless of

⁸² Friedman 2016: 54.

⁸³ Krusemark 2013: 15325.

⁸⁴ *Ivi*: 15331.

⁸⁵ Herz 2012: 92.

⁸⁶ George 2012.

political affiliation); green-light eating pets,⁸⁷ lie on résumés and even endorse cannibalism.⁸⁸ Such experiments fit DFM's profile, where alarming aromas repel racists at the door, yet compel adventurers to let down their guard, once inside.⁸⁹

In order to know whether a sound is appropriate, signals danger or repulses, as when someone steps on a foul substance; we learn how to assess noises. Smell is no different. We gather additional information to discern disgusting aromas from those that provoke disgust. We learn to "smell-in", as Korsmeyer terms it; otherwise we risk deception.⁹⁰

Concluding remarks

In contrast to views that treat disgust as basic, moderate, aesthetic or encapsulated, the approach developed here characterises disgust as values-driven and subject to perceptual learning. Value disgust captures the way negatively-valenced smells facilitate retention and retrieval, since they trigger anxieties, heighten attention, distract listeners, boost concentration, accelerate task completion, encode memories and linger as memories; eventually modifying beliefs. Such superpowers cohere with a 2014 experiment performed by Saive *et al.* that demonstrated that pleasant and unpleasant odours, though not neutral ones, prompted the accurate retrieval of three different episodic memories (each featuring three unfamiliar odours, positioned at three specific locations within a visual context) that had been encoded with emotional contents.⁹¹ Moreover, "When the binding between the odours and the spatio-contextual features of the episode was successful, the odour recognition and the episodic retrieval collapsed into a unique memory process that began as soon as the participants smelled the odours".⁹² They conclude, "The emotion carried by odours, regardless of their valence does not influence encoding behavior but promotes their accurate recognition and the accurate retrieval of the visuospatial context of the episodes".⁹³

I also noted that unpleasant scents such as fart sprays are known to prime participants, sometimes perverting their ordinary views, such that they express biases, as well as beliefs they ordinarily find abhorrent. Clearly, disgusting smells are powerful tools of manipulation (they prime, distract, accelerate, encode,

⁸⁷ *Ibidem*.

⁸⁸ Herz 2012: 191.

⁸⁹ Fox *et al.* 2018: 362.

⁹⁰ Herz 2012: 55.

⁹¹ Saive *et al.* 2014.

⁹² *Ibidem*.

⁹³ Herz 1997, Saive *et al.* 2014.

defer to context and deceive), sometimes prompting oppositional dispositions. Such findings contradict centuries of philosophical work that considered smell a “stimulus-produced pleasure”, and thus inferior to sight and sound.

To claim as Kant did, and others have since, that smell doesn’t require higher cognitive faculties ignores smell’s deceptiveness and underestimates olfaction’s continuous updating of its cells to procure accurate judgments. Value disgust repudiates what Leon Kass termed the “wisdom of repugnance”. That naming tames disgust suggests that it’s hardly a reliable detector. Herz credits disgust with teaching “us about the inner workings of our brains and personality”,⁹⁴ yet it mostly demonstrates our brain’s susceptibility to our environment. Ultimately, how we react to disgusting smells reveals our vulnerability to manipulation. As she correctly points out, “disgust reveals the fundamental concerns that underlie our existence”.⁹⁵ She adds, “Though we learn to turn off our outward zeal for these fascinations, the questions, temptations and fears never go away. This is why we remain lured by disgust throughout our lives”.⁹⁶ Only life’s rich experiences can teach us when to trust disgust.

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⁹⁴ Herz 2012: xi.

⁹⁵ *Ibid.*: xii.

⁹⁶ *Ibid.*: 52.

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Andreas Philippopoulos-Mihalopoulos¹ ONTOLOGICAL ANOSMIA

Abstract

Anosmia, or the absence of smell, is not just a subjective experience but, as I argue in this text, an ontological affect. Anosmia in the form of deodorisation and hygienisation, is the aim for many institutions, indeed often societies as a whole, that try to direct individual affects along prefabricated targets of racial, ethnic and class discrimination, rampant consumerism and unconscious participation in atmospheric engineering. Odours consist of what I would like to call the *olflow*, the incessant flow of odours in which human and nonhuman bodies are agents of odour generation and consumption. Odour engineering directs the *olflow* and reinforces olfactory discrimination. I conclude with a call against the threat of what I call 'ontological anosmia', namely the flattening of multiplicity of desire and the engineering of emergence as spontaneity.

Is this how nothing smells, she wondered

She has a severe cold. It isn't the first time of course. She has had bad colds in the past and has always recovered. This time, however, it is different. As if the world has been placed out of bounds. Her breathing is still impaired – not the lungs. They seem to be working fine. It's the nostrils that stop the flow, as if they try to keep her isolated, protected, immune. The damage, however, is already done. She has lost her sense of smell. Not her taste, strangely. She can still taste food although not as clearly and acutely as before. But the loss of smell has been incapacitating. For years now, deodorised dangers have been attacking her from all sides: gas leaks, spoiled food, fire smoke. The world is

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