Disgust and its Implications for Naturalistic Virtue Ethics

James Paskin

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Summary

This thesis examines the implications an empirical account of disgust has for Naturalistic Virtue Ethics. It begins by characterising character trait-based Naturalistic, Transcendental, and Consequentialist Virtue Theories and then identifies Naturalistic Theories as the subject of this thesis because their dependence on the psychological reality of virtue makes them vulnerable to an incompatible account of the psychology of disgust. A review of the normative debate surrounding disgust's place in morality then establishes disgust's relationship with virtue, situating it as an aesthetic moral reaction to displays of vice.

Using up-to-date empirical literature and evolutionary theory, the thesis then constructs the Dual Mechanism Theory, an original account of disgust which characterises it as possessing a physical mechanism — a reflex that facilitates poison and parasite aversion — and a social mechanism — an emotion that communicates negative character judgements to maintain in-group cohesion.

Compatibility between the Dual Mechanism Theory and the Naturalistic Virtue Ethics is then examined, and the practical and metaethical problems of motivation interference by physical disgust are established. The practical problem is resolved through a commitment to a limited developmental account of virtue. However, attempts to resolve the metaethical problem produce further problems, so it is concluded that the metaethical problem is irresolvable for existing forms of Naturalistic Virtue Ethics.

The thesis concludes by integrating Webber's and Tanesini's formulations of Attitude Virtue with McMullin's phenomenological account of natural goodness and examining whether this reconceptualization of Naturalistic Virtue can solve this problem. It explains how Attitude Virtue can avoid the problems present in character trait-based theories and how McMullin's theory of natural goodness facilitates a naturalistic justification of motivation interference. Therefore, this reformulation of Naturalistic Virtue effectively resolves the metaethical problem and so establishes its compatibility with disgust in light of the considerations raised in this thesis.

Contents

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Introduction

Since its inception, the virtue theoretical project of identifying moral goodness with the possession of admirable character traits has emphasised the necessity of the individual's emotional reactions aligning with their virtuous behaviour. Aristotle determined the genuinely virtuous agent finds virtuous behaviour pleasurable (2008: 26-27); in her argument for a return to virtue focused ethical theories, Elizabeth Anscombe stressed the importance of understanding the place of emotions in moral behaviour (1958); and modern virtue theorist Rosalind Hursthouse established that the virtuous agent "has the appropriate feeling(s) or attitude(s) when she acts" (1999: 125). This stipulation can also be observed in other modern virtue theories appearing in Annas (2011: 68), Slote (2001: 38) and Swanton's (2003: 26) accounts. Emotional alignment with virtuous behaviour is deemed a necessary feature of virtue because it displays character congruence with virtuous principles by showing that the individual feels the right way about their virtuous behaviour.

Given that virtues are also described as 'deep' character traits, presented as persistent and reliable dispositions to demonstrate they are consistent features of an individual's personality, when taken alongside the previous point, the virtuous individual's emotional response must consistently and reliably align with virtue.

Research into the effects of the emotion of disgust on cognition suggests it has the capacity to interfere with moral judgments. For example, when Schnall et. al. (2008) utilised environmental manipulation to elicit disgust in individuals and asked them to make moral judgments whilst disgusted, results demonstrated a subsequent rise in the severity of moral judgements. If, after examination of the broader literature, it is confirmed that it is in fact disgust that is interfering with moral judgements in such instances, these effects can be seen to challenge the virtue theoretical assumption that individuals are capable of consistently acting from an appropriate emotional disposition. They demonstrate that disgust will interfere with appropriate emotion when it incidentally occurs during a moral judgement, implying a lack of consistency in character necessary for virtue. This research also presents further implications for disgust's relationship with virtue as it suggests disgust can affect behaviour, thus affecting virtuous action.

This gives rise to two main problems for virtue ethical theories. First, it seems to make ethical virtue a practical impossibility. Second, and perhaps more importantly, it leaves naturalistic virtue theories without a stable conception of natural goodness and therefore without a definition of virtue.

This thesis will examine this relationship between disgust and modern interpretations of Naturalistic Virtue Theory, establishing disgust's place within virtue theory, exploring the implications an empirical account of the emotion has for virtue theories, and assessing whether it is possible for virtue theories to successfully overcome any problems that arise. Whilst exploring this, the thesis also aims to develop a more detailed understanding of virtue's relationship with emotion and to deepen our understanding of naturalistic virtue theories whilst testing whether they present a coherent account of natural goodness. As it will transpire that character trait-based Naturalistic Virtue Theories are unable to do so, this thesis also aims to promote an alternative approach to naturalistic virtue that does present a coherent account of natural goodness, thus developing the psychological realism of virtue ethics.

One foreseeable issue when undertaking this project is establishing an accurate characterisation of disgust as the existing literature contains numerous different accounts of the emotion all of which present unique interpretations of the function of the emotion, and different cognitive characterisations of the emotion that lead to different accounts of how the emotion behaves. This is further complicated by the fact that disgust is studied by a significant number of different disciplines and as Daniel Kelly comments "there is no single overarching debate or research program to canvass" (2011: 3), so there is often little coherence in the language used to describe the emotion, or consistency in the concepts established and used to describe features of the emotion. Therefore, a further goal of this thesis is to stratify some of this research into a coherent account that can be used for this investigation and for future work on disgust.

Chapter One will begin by identifying which form of virtue ethics is most challenged by the problem of disgust. Naturalistic, Transcendental, and Consequentialist virtue theories shall be characterised and from this it will be identified that an incompatible account of the psychology of disgust poses the biggest issue for Naturalistic Virtue Theories because they depend on the psychological reality of virtue for their claim that virtue is naturally good.

This chapter will then establish disgust's relationship with virtue through an examination of the normative debate surrounding disgust's place in morality, which will determine that disgust is a necessary emotion for virtue as it communicates aesthetic moral reactions towards displays of vice.

Chapters Two and Three will develop an operable account of disgust, with Chapter Two determining the evolutionary origins and functions of the emotion, and Chapter Three formulating a behavioural profile and an account of disgust elicitation. These chapters will identify that disgust has a physical and social evolutionary origin, producing two distinct mechanisms: the physical disgust reflex that responds to signs of poison and parasite threat, produces the characteristic nauseous aversive disgust response, and is unresponsive to reason, context, and intentionality; and the emotion of social disgust that responds to displays of negative character traits and *is* responsive to reason context and intentionality. Chapter Three will conclude that social disgust occurs in response to threats to meaning structures concerning good character, but will recognise that this elicitation mechanism may not apply to the physical disgust reflex.

Once this 'Dual Mechanism Theory' of disgust has been established, Chapters Four, Five and Six will identify, develop, and apply a problem that this theory of disgust raises for naturalistic virtue theories. Chapter Four will determine that when a physical disgust elicitor is the object of evaluation in moral judgements it can interfere with appropriately virtuous behaviour. Chapter Five will determine exactly how this problem affects cognition and virtue, and then identify further features of this problem of motivation interference and discuss their implications for virtue. Most notably, the intensity of the physical disgust reaction triggered towards the elicitor that is the object of evaluation can determine the level of motivation interference that occurs.

Chapter Six will then determine this problem's implications for naturalistic virtue theories. It will identify that disgust causes practical problems as it consistently inhibits the individual's capacity for appropriately virtuous reasoning and action, making virtue unattainable. It will then explain that this problem can in fact be overcome by committing to a developmental account of virtue presented by Julia Annas, and accepting that one can be considered 'virtuous enough' despite not being completely virtuous.

Chapter Six will also establish that disgust causes metathetical problems as natural goodness necessarily requires a psychologically realistic account of virtue, but the problem of motivation interference demonstrates that the consistency of character required for this is psychologically unrealistic. Discussion will determine that further problems arise for virtue and natural goodness if character trait-based Naturalistic Virtue Theories attempt to commit to a limited account of virtue to accommodate the psychological reality of virtue, so motivation interference presents an irresolvable metaethical problem for Naturalistic Virtue Theories.

Finally, Chapters Seven and Eight will establish an alternative account to character trait-based Naturalistic Virtue Theories and examine its capacity to resolve the problem. Chapter Seven will present Attitude Virtue, as formulated by Alessandra Tanesini and Jonathan Webber, and establish its compatibility with thesis relevant concepts. It will then identify that features of Attitude Psychology reveal flaws in the understanding of natural goodness used by the previously discussed naturalistic theories and introduce Irene McMullin's phenomenological account of natural goodness which can instantiate the features of natural goodness revealed by the psychology of attitudes.

Chapter Eight will then re-examine the problem of motivation interference using Attitude Virtue and this updated formulation of natural goodness and determine that Attitude Virtue can present an account of virtue that is compatible with the psychology of disgust. It will determine that Attitude Virtue can resolve the practical problem in a similar way to character-trait based virtue theories — by committing to a limited, developmental account of virtue. It can also resolve the metaethical problem by committing to a limited, developmental account of virtue that accepts motivation interference as a feature of natural goodness and it is explained how this avoids the further problems that arise when character-trait based theories attempt to commit to a similar limited account.

The thesis will conclude by recognising that Naturalistic Virtue Ethics can provide an account of virtue that is compatible with the psychology of disgust presented by the Dual Mechanism Theory, provided it commits to a limited developmental account of Attitude Virtue as outlined in Chapter Eight. It will acknowledge that this conclusion of compatibility is limited to the points of compatibility discussed in this thesis, as a further point of potential incompatibility between disgust and Naturalistic Virtue was identified in Chapter

Four, but the thesis elected not to discuss it as it suggested a problem that was not unique to disgust. This is identified as a worthwhile avenue of further investigation, and further closing remarks will identify other areas of potential further research illuminated by this investigation.

Finally, before the thesis begins, it is important to establish the transferability of concepts between virtue ethics and empirical psychology. As virtue ethics makes normative claims about how one ought to act and empirical psychology explains psychological phenomena through objective examination, the two may be judged as incompatible for cross examination as virtue ethics concerns *ideal* human behaviour and therefore does not necessarily have to be grounded in psychological reality. However, we have already seen that the normative claims of Naturalistic Virtue Theories are made using prescriptions and assumptions about the natural psychological functioning of human beings (for example assuming that humans are capable of consistent virtue-appropriate emotional reaction) and some virtue theories are founded in a belief that virtue constitutes the natural state for humans as organisms. Therefore, empirical psychology can be used to test these claims for philosophical rigour.

Chapter One – Virtue Ethics, Emotion, and Disgust

1 Introduction

This chapter aims to establish a foundational understanding of virtue necessary for the coming enquiry, and to focus the investigation; identifying which formulation of virtue could turn out to be incompatible with the psychology of disgust; and conducting an initial exploration of disgust's relationship with morality and virtue.

It will begin by providing a brief explanation of what virtuous character traits are, and then provide detailed formulations of Naturalistic, Transcendental, and Consequentialist Virtue Theories. Beginning with Naturalistic Virtue Theories, it will explain their naturalistic foundation using Foot's conception of natural goodness, and then provide an account of Rosalind Hursthouse's Qualified Agent Theory, Michael Slote's Agent-Based Theory, and Christine Swanton's Pluralistic Theory. It will then characterise Transcendental virtue theories, providing accounts of Sophie Chappell's Platonistic Theory, Robert Adams' Divine Theory, and Linda Zagzebski's Divine Motivation and Exemplarity accounts. It will conclude with an account of Julia Driver's Consequentialist Virtue Theory.

Once these characterisations have been established, the chapter will identify that Consequentialist Virtue is purposefully constructed to not require harmonious internal states, so it is not threatened by an incompatible account of the psychology of disgust; and Transcendental Virtue Theories' establish an unattainable standard of moral goodness meaning individuals can only achieve 'good enough' virtue, which entails these accounts of virtue do not have to be psychologically realistic and therefore do not have to be compatible with the psychology of disgust. However, Naturalistic Virtue Theories depend on the psychological realism of their characterisation of virtue for consistency in the idea of natural goodness, so an incompatible account of psychology of disgust could demonstrate that their account of virtue is flawed. As this discussion establishes that disgust potentially poses a significant problem for Naturalistic Virtue Theories, it will consequently be identified as the focus of examination throughout this thesis.

The chapter will conclude by establishing disgust's relationship with virtue through an examination of the normative debate surrounding disgust's place in morality. It will first consider arguments concerning whether disgust in fact has an appropriate place in moral

judgements and behaviour, from which it will determine that disgust can justifiably be considered an aesthetic moral judgement. The conclusion of this debate will then be considered in relation to virtue, recognising that this characterisation implies disgust is an aesthetic moral reaction to displays of vice.

2 Virtues

The coming characterisations of virtue theories will demonstrate that formulations of virtue can vary significantly. However, it is possible to identify some common features that provide a basic description of what virtues are.

Virtues are generally understood to be admirable character traits that lead to moral goodness, with some examples being honesty, fairness, and bravery. Julia Annas provides a basic description of virtues, establishing that they are "persisting, reliable, and characteristic" (2011: 8) features of the individual. The genuine possession of virtue entails that it is consistently displayed throughout the individual's life to the extent that the individual is depended on to display virtue in both everyday instances and trying moral situations. Annas further describes virtues as 'deep' features of an individual (2011: 8) establishing their centrality within the individual's character and demonstrating that they are firmly held and entrenched aspects of an individual's personality.

She also identifies that virtues are *active* features of an individual character (2011: 8), the genuine possession of virtue entails they hold a significant enough place within the individual's character that they compel the individual to act whenever necessary. Consequently, if a situation necessitates a virtuous response from an individual and they choose not to do so, they cannot be considered to be virtuous (even if they previously displayed virtue before), as this demonstrates they do not value the virtuous behaviour enough to act, and it is not a sufficiently entrenched part of the individual's character.

3 Naturalistic, Transcendental, and Consequentialist Virtue

Several different theoretical justifications exist for the moral value of virtuous character traits. This section will now present these, along with the different formulations of virtue that exist within each one. It shall begin by presenting Naturalistic Virtue Theories, and then proceed to present Transcendental and Consequentialist Theories.

3.1 Naturalistic Virtue Theories

Phillipa Foot is recognised to have presented the first modern naturalistic justification of virtue, so her account shall be used to establish the foundational justification for the Naturalistic Virtue Theories presented in this chapter.

She begins by recognising that because humans developed in a similar natural setting to other organisms, the "evaluation of human will and action share a conceptual structure with evaluations of characteristics and operation of other living things, and can only be understood in these terms" (2001: 5). This entails that good human functioning can be assessed in a similar way to an evaluation of what it means for other lifeforms to function well. From this, she formulates the idea of natural goodness as: "'intrinsic' or 'autonomous' goodness in that it depends directly on the relations of an individual to the 'life form' of its species" (2001: 27). For example, Giraffes evolved long necks to graze on acacia trees, the natural goodness of an individual giraffe is partially determined by its necks capacity to facilitate this, as this will enable it to feed itself and thrive in its natural environment.

Foot argues that, similarly to animals, there are certain natural necessities that facilitate humans living well naturally (for example the capacity for communication and imagination) and without these capacities Foot recognises that humans are capable of surviving and reproducing, but questions whether we would be capable of flourishing (2001: 43). However, unlike animals, Foot acknowledges that "the good of survival itself is something more complex for human beings than for animals" and human thriving exceeds mere suitability for environmental fit (2001: 42). She uses the example that the physical inability to have a baby is considered a 'natural defect', but childlessness through choice or celibacy is not a 'defective choice' and goodness can be achieved through other pursuits such as through commitment to work (2001: 42). Humans therefore have the capacity to choose the life they want to lead and still flourish[1].

She identified the component distinguishing humans from other organisms is the capacity for rationality: "animals go for the good (thing) *that they see*, human beings go for *what*

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[1] This capacity to choose different lives may occur as a result of our capacity to imagine different ways of living a fulfilled life. Foot may therefore have stipulated imagination as a natural necessity because it facilitates the conditions of flourishing that are unique to humans.

they see as good" (2001: 56). Rationality enables us to respond to the reasons for doing a specific action, understanding that some things are good for ourselves and others, and some things are bad for ourselves and others. The ability to reason therefore grants humans "the power to see grounds for acting in one way rather than another; and if told that they should do one thing rather than another, they can ask *why* they should" (2001: 56). This capacity to generate and interpret reasons for actions also introduces ethical evaluation into human life as we can evaluate reasons for other's actions and *choose* our courses of action depending on moral reasoning.

Using Elizabeth Anscombe's discussion of promise keeping, Foot explains how natural goodness can be achieved through virtue. Foot states that Anscombe "remarks that much human good hangs on the possibility of one person being able to bind another's will by something in the nature of a promise or other contract" (2001: 46). Foot establishes the truth of this statement by recognising that "Any exchange of goods or services above the most primitive level of direct simultaneous exchange depends on the carrying out of tacit or explicit understandings of which keeping a promise is one specific form" (2001: 45). Without promise keeping then, human beings would have no secure ways of getting others to do things, no way to trust an exchange of goods and services and no way to generally trust other people. This would inhibit the individual's ability to satisfy natural needs like shelter, food, and safety. Individual's genuinely valuing and consistently displaying honest and just behaviour will maintain and enforce the adherence to promises, thus fulfilling this natural need. Virtuous behaviour then facilitates the conditions for good natural functioning.

Foot continues that rational ethical reasoning leads individuals to prefer virtuous character traits in others as "It matters, not just what people do but what they are" (2001: 48). A single instance of morally good behaviour gives little information as to the disposition of the individual, whereas the regular exhibition of honesty or fairness to display the possession virtuous character traits demonstrates the individual is consistently disposed to act in a morally preferential way. Virtue therefore demonstrates individuals are appropriately natured, reliable, and capable of cooperating to fulfil natural needs.

Therefore, the exercise of virtues satisfies natural needs, enables individuals to pursue different ends they deem worthwhile[2], and is a behaviour preferred and justified by rational moral evaluations, thus fulfilling the established conditions of natural goodness.

3.1.1 Qualified-Agent Theory

Qualified-agent theory is a Eudaimonic virtue theory formulated by Rosalind Hursthouse which takes the fully virtuous "qualified" agent as a model for virtuous behaviour and right action.

Hursthouse begins her account of virtue with a description of right action:

> P.I. – An act is right iff it is what a virtuous agent would characteristically (i.e. acting in character) do in the circumstances.
>
> P.I.a – A virtuous agent is one who has, and exercises, certain character traits, namely, the virtues.
>
> P.2 A virtue is a character trait that … a human being needs for Eudaimonia
>
> (1999, p.30)

Premise 1 grounds conditions of right action in the actions of the qualified virtuous agent with the qualifier 'characteristically' ensuring the virtuous person's actions are not universally considered right in recognition of their potential fallibility in instances of moral unluckiness or extremely trying moral situations.

The second premise identifies that possession of the virtues is necessary for achieving Eudaimonia; the goal of life individuals should strive for. Hursthouse establishes that the best translation of Eudaimonia is 'flourishing' (1999: 10) as it holds a more objective standard for the individual than other translations such as happiness or contentedness. An individual may judge themself to be happy when they are physically and psychologically unhealthy, as personal happiness is a subjective estimation. They also may judge personal happiness regardless of moral actions, acting poorly toward others and still considering themselves happy. In contrast, an individual cannot be said to have flourished if they are physically or psychologically unhealthy. To have flourished an individual needs to meet an

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[2] Thus, facilitating choice.

external societal standard in which they have developed well individually, and in their interaction with others in society.

Here, the naturalistic character of qualified-agent theory can be observed through its commitment to Eudaimonia. Similarly to natural goodness, Eudaimonia is established as an objectively measurable criteria of good natural functioning which is once again achievable through virtue. Foot also acknowledges the connection between Eudaimonia and natural goodness by recognising her account of naturalism has "an understanding of the word 'happiness' that is close to Aristotle's *eudaimonia* in that operation in conformity with the virtues belongs to its meaning" (2001:97). In Foot's account, the 'happiness' achieved through virtuous behaviour is understood to be similar to that described by Aristotelian Eudaimonia.

Hursthouse then describes what it is to act virtuously on the Qualified Agent account:

> (1) […] it is to do a certain sort of action […] 'A virtuous, good, action' […] such as helping someone, facing danger, telling the truth, repaying a debt, denying oneself some physical pleasure, etc.
>
> (2) The agent must know what she is doing.
>
> (3) The agent acts for a reason and, moreover, for the right reasons(s).
>
> (4) The agent has the appropriate feeling(s) or attitude(s) when she acts.
>
> (1999: 123-125)

Premise one reiterates the point established in Section Two that the virtues are active concepts, necessarily requiring action, and provides some examples of what acts from virtue may look like. Premise two shows the virtuous agent actively decides to do the action, ruling out actions from impulse or natural virtue. Premise three specifies that the agent's reasons for acting must express a sentiment that aligns with the virtue their act is expressing, to demonstrate their values align with this virtue. Hursthouse claims this distinguishes between "'acting morally' on the one hand and 'acting well' on the other" (1999: 125), it is possible for an individual to follow the example of the qualified-agent and 'act morally' but if their reasons for acting do not align with the virtuous agent's reasons they have not 'acted well'. For example, donating money to a hospital is 'acting morally' as this is what the

qualified agent would do. If the agent donates from a desire to look good among their peers and increase their social standing, they have acted morally but not well as the virtuous agent would not have acted for these reasons. If they act from a belief in the genuine value of the charity and generosity then they are acting morally and well, as this aligns with the qualified-agent's reasons for action.

The final premise explains how, in performing the right action for the right reasons, the virtuous agent also experiences appropriate emotions whilst doing it. Hursthouse stipulates "these emotions will be felt on the *right* occasions, toward the *right* people or objects, for the *right* reasons" (1999: 108). Appropriate emotional reaction is important, as Hursthouse identifies it demonstrates the Aristotelian distinction between "the 'continent' or 'self-controlled' type of human being (who has *enkrateia*) and the one who has full virtue (*arete*)" (1999: 92). *Enkrataic* individuals know, and do, what they should do out of a sense of duty and contrary to their desires. Whereas individuals with *arete*, know and do the virtuous thing with a sense of enjoyment or satisfaction. The nature of the virtues implies something pleasurable or harmonious about doing them, and the fully virtuous individual embraces this when they act. Therefore, feeling appropriate emotions indicates the individual genuinely understands and possesses the virtues, distinguishing them from those who merely possess "a child's natural virtue with reason, in the form of practical wisdom simply added on" (Hursthouse, 1999, p.107).

It is also worth noting the nuance of this stipulation, as not only should the virtuous individual experience the appropriate emotion at the appropriate time, but they are also required to experience this appropriate emotion to the right degree, as this reflects Hursthouse's requirement 'for the right reasons'. For example, the severity of anger necessary for an appropriately virtuous emotional reaction towards the unjust act of stealing from a known thief will be less than the severity of anger towards someone who stole from an innocent as this demonstrates that the individual can identify the relevant moral features of the situation and respond with the appropriate intensity.

3.1.2 Agent-Based Theory

Agent-Based Virtue Theory is developed by Michael Slote and "treats the moral or ethical status of acts as entirely derivative from independent and fundamental aretaic (as opposed

to deontic) ethical characterisations of motives, character traits, or individuals" (2001: 5). Slote then establishes an act is virtuous "if and only if it comes from good or virtuous motivation … or at least doesn't come from bad or inferior motivation" (2001: 38), and for him a virtuous motivation is best displayed by a caring motivation (2001: 136). An ethics of care understands morality in terms of "caring, responsibility, and interrelation with others" and within this Slote adopts a partial, interpersonal approach - "caring *more* for some people than for others" (2001: 29).

Slote is compelled to accept that partial caring best instantiates virtuous motivation as he is worried that an impartial 'benevolent' caring motivation, which shares concerns equally amongst agents, will run into trouble when presented with ideas about love. He argues that if we are partial with whom we love, then, "by the very nature of love, one would be more concerned about their welfare than the welfare of those others" - it seems immoral to pay reduced attention to those closest to us in favour of strangers as impartiality demands (2001: 136). A further problem also exists in that "given the size of the human species and the conditions of human life as we know it" (2001: 136) it seems logistically impossible and too demanding to be equally benevolent to everyone, including those you do not know.

A justification for why a caring motivation is a suitable foundation for virtuous motivation can be found in Slote's later work. This later work continues his moral sentimentalist[3] project that he began in *Morals from Motives* (2001: ix) and is thus compatible with his Agent-Based theory. Slote accepts the psychological argument that empathic concern[4] is the root of all prosocial action, motivating all altruistic and caring behaviours (2005: 227). This leads him to support Batson's (2014) argument that the level of empathy an individual possesses is a key factor in determining whether someone will be altruistic towards others, and from this he consequently claims: "empathy and the notion of empathic caring for or about others offers us a plausible criterion of moral evaluation. Differences in (the strength of) normally or fully developed human empathy corresponds pretty well, I think to differences of intuitive moral evaluations" (2007: 16). As a caring motivation expresses

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[3] Moral sentimentalism establishes emotions and desires as the foundation for moral judgements and moral motivation.
[4] Which he defines as "having the feelings of another (involuntarily) aroused in ourselves, as when we see another person in pain" (2007:13).

concern for the welfare of others it can be understood to be an expression of empathic concern and can therefore be used as a measure of an individual's overall capacity for moral goodness.

The naturalistic foundation of Slote's virtue theory can be observed from this as he has formulated an account of moral goodness from human psychological function and has established that a virtuous caring motivation best instantiates this goodness, therefore suggesting that virtuous behaviour is a natural component of good psychological functioning. Slote's approach differs somewhat from Foot and Hursthouse who argue that virtuous behaviour facilitates individual flourishing, implying a positive effect on the individual's life beyond appropriate moral behaviour. However, despite taking this different approach, it is possible to speculate that the outcome of Slotean natural goodness will produce a similar effect to the one identified by Eudaimonia and natural goodness - everyone acting from an empathic caring motivation will likely lead create optimum conditions to live a 'good' life, thus facilitating the capacity to flourish.

To explain what a virtuous caring motivation entails, Slote elaborates on its structure, identifying balance as a key feature. A virtuous individual must balance their concern "between intimate caring (our concern for near and dear) and humanitarian caring (our concern from people in general)" (2001: 66). This accounts for the justified moral obligation love creates towards those closest to us, and recognises that whilst our primary obligation is to those nearest and dearest, we still have moral concern for other agents and consider them when expressing caring. Slote also identifies self-concern, the implication "that we have moral obligations to ourselves and to our own happiness" as a third category to be balanced alongside the others (2001: 77). However, he recognises this self-concern does not share the same relationship as intimate and humanitarian caring as someone who is capable of balancing all three acts "rightly or permissibly, but s/he may also act permissibly and will indeed act supererogatorily if her actions reflect a *lesser* degree of self-concern than that was just mentions" (2001: 78). Self-concern then, whilst important, can make way for the other two when necessary.

Slote then describes how balance is achieved:

"when a person has two basic concerns, for x and for y, then to say that those concerns are in some sort of balance is ordinarily to say that the person isn't mostly concerned with x and isn't mostly concerned with y"

(2001: 68)

When an agent is faced with the need to care for multiple concerns, they do not disproportionately engage with one or the other. This does not necessarily mean simply dividing their time equally between concerns, rather, showing each concern the appropriate regard it is due without neglecting the other. Slote uses the example of a father who has two adult children who cares about equally; one is independent and successful, and the other is dependent and disabled (2001: 67-68). The father is in a position where his time and resources will greatly benefit the disabled child, while the other can manage fine on their own (without holding any resentment toward the father for his attention to their sibling). His actions will not be unbalanced if he directs most of his attention toward the child that needs help, provided he does not forget about (and care for) the other sibling when necessary. An agent with a proper caring motivation will assess how to appropriately balance their concern based on situational circumstances.

Finally, whilst Slote has established a comprehensive account of virtuous motivation, he has not explained what a motivation is. This may have been because it was not necessary for his project – it is possible to formulate an account of virtue as a caring motivation without exploring the structure of motivation – but doing so will be useful for the current project.

Transcendental virtue ethicist Linda Zagzebski describes motivation-based virtue theory, which can be used to clarify this[5]. She identifies a motive as "an emotion that initiates, sustains and directs actions towards ends" (1998: 541). She clarifies that emotions do not exclusively inform motives, as some physiological urges such as hunger, thirst, and fatigue drive motives, but "the motives that have foundational ethical significance are emotions" (1998: 541). She also identifies that individuals can experience emotions that do not motivate, for example, joy, sadness, and tranquillity may be experienced passively, and the

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[5] Despite formulating a transcendental account of virtue, Zagzebski's account begins with a simple explanation of what a motivation-based theory is (1998: 541), so it is suitable for use in describing the foundation of Slote's theory.

individual may experience an emotion that usually motivates but does not on this occasion [6], but she recognises all emotions retain the capacity to motivate. It is however "usual to *call* an emotion a motive only when it actually operates to motivate on a particular occasion" (1998: 541).

Given that Slote determined the individual's capacity for empathy as the baseline for judging individual moral capacity, and the possession of a caring motivation was identified as a representation of the individual's empathic capacity, Zagzebski's account of motivation seems to fit with the Slotean picture as a caring motivation can be understood as the individual's capacity to experience appropriately compelling empathic emotions.

3.1.3 Pluralistic Virtue Theory

Christine Swanton's pluralistic approach to Naturalistic Virtue Ethics embraces pluralism in "the conception of virtue, and the view of rightness of action based on that conception" (2003: 1). Her account recognises that there are many ways of understanding what a virtue is, and many different understandings of how these interpretations of virtue can lead to right action.

She establishes that her approach is inspired by Aristotle and Nietzsche, taking from Aristotle "the conception of virtue itself as a disposition in which both reason and emotion are well ordered", and "the idea that virtue is a state of appropriate responsiveness to or acknowledgment of, what I call the 'demands of the world'" (2003: 8). Her Nietzschean inspiration serves to address the uncodifiability she observes in Aristotle's account, as she claims there is a lack of clarity in the intricacies of practical wisdom "sourced in the extreme difficulty of knowing how to distinguish virtue itself from (very closely allied) vice." (2003: 9-10). She demonstrates this through the example that neurotic pride is hard to distinguish from 'a solid sense of self-confidence' without some form of background theory (2003: 10). Swanton therefore incorporates Nietzsche's ideas of self-love through undistorted inner strength into her understanding of virtue (2003: 11). This is understood to be an individual's excellent expression of their inner strength that is devoid of distortions like narcissism and

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[6] Perhaps because they are not experienced intensely enough to motivate action.

envy (2003: 134-135), this enables accurate self-perception and the capacity to distinguish between closely related virtues and vices to correctly display virtue.

Swanton then provides a basic explanation of her pluralistic understanding of virtue, first defining virtue as "a good quality of character, more specifically a disposition to respond to, or acknowledge, items within its field or fields in an excellent or good enough way" (2003: 19). She then identifies four component features of virtue, the first being the *field* of virtue, which "consists of those items which are the sphere(s) of concern of the virtue, and to which the agent should respond in line with the virtue's demand" (2003: 20). These spheres can be both internal or external to the agent and may depend on situations, for example excessive bodily pleasure informs the field of concern for temperance. The second component is the *modes* of moral responsiveness, which concern the "*kind of responsiveness* to items in a virtue's field" (2003: 21). Examples of modes of responsiveness are honouring value, promoting benefit or value, honouring rules, and reacting in appropriate ways. Using the example of honesty, it concerns the mode of honouring rules and honouring and valuing others.

Component three is the *bases* of moral responsiveness, the nature of the items that inform the field of a virtue determine the virtuous reaction from the individual. Swanton identifies four bases: "value, status, good (or benefit), and bonds" (2003: 23). For example, an individual may not like their boss, but they are honest with them from the basis of status and good –acknowledging and respecting their superior's authority, and recognising the good that honesty promotes.

The final component is Swanton's claim that virtue is a *threshold concept:* "virtue sets a *standard* for responsiveness to items in a virtues field: such responsiveness has to be excellent or good enough if it is to be virtuous" (2003: 24). Swanton recognises that the demands of the world[7] impedes the achievement of an idealised standard of perfect virtue, and accepts that virtue is still attainable when an individual crosses a threshold of sufficient virtuous behaviour determined by their context (2003: 25). Within this, Swanton also recognises the 'shape' of the virtues limits the individual's ability to morally respond to

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[7] Such demands may be understood to be the existence of extremely trying and irresolvable moral dilemmas, and the existence of moral luck.

situations (2003: 25). Certain virtues and certain situations are more morally demanding on the individual than others (for example, trying to be just when one is emotionally involved with something) and so the threshold of excellence for these more demanding virtues is lower than other, more easily executable virtues.

From here, Swanton concludes her characterisation of virtue by exploring the necessary conditions for sufficient virtuous action — elaborating on the standard of good enough virtuous action, and defining the conditions for right action. She recognises the expression of fine inner states is a necessary condition for good enough virtue, elaborating that this requires the appropriate *mode* of moral acknowledgement undistorted by inaccurate self-love (2003: 26). She also recognises the Aristotelian foundation of her conception of virtue here, acknowledging the expression fine inner states "must also display practical wisdom and express a firm disposition of relevant fine feelings and emotions" (2003: 26).

Finally, a virtuous action is a right action if it is an "an excellent realisation or attainment of the target or end of a virtue" (2003: 29). Swanton determines virtues have different overall targets, for example, the target of the virtue of charity is the well-being of others, the target of justice is fairness, and the target of honesty is telling the truth. The agent must hit these targets established by virtue, but Swanton recognises "an act may hit the target of a virtue – realising its end – without the act being an act *from a state of* virtue" (2003: 29). They must therefore also act excellently when hitting this target, displaying fine inner states, and appropriately meeting the conditions established by the other fundamental components of pluralistic virtue ethics.

The naturalistic foundation of Swanton's theory is established in her connection of virtuous behaviour to the conditions of a good human life (2003: 56). Swanton breaks the requirements of a good life down into two parts: the prudential component of the individual's personal satisfaction (their thriving and happiness in their life) and moral meritoriousness — their "consistent appropriate responsiveness to the demands of the world" — the requirement that the individual acts appropriately morally in situations (2003: 59). Swanton recognises these two requirements may be seen to conflict, but contends that virtuous behaviour reduces the tension between them as "we can show a certain sort of connection between the thriving, flourishing life of personal satisfaction and the life of virtuous responsiveness to the demands of the world" (2003: 59).

Swanton draws from psychological research into chronic anger to evidence this connection. Referencing Daniel Goleman's (1996) work, she identifies "chronic anger and hostility form the basis not only of much vice [for example injustice, disrespect, and impatience], but also of human ill health [potentially leads to high blood pressure, heart disease, or a heart attack]" (2003: 61). Chronic anger inhibits the individual from meeting either condition Swanton establishes for a good life – it leads to negative physical and psychological health defects, thus inhibiting flourishing, and it likely informs a negative disposition in moral interactions with others, thus inhibiting their consistent moral behaviour. Swanton then cites Goleman who establishes "The antidote to hostility is to develop a more trusting heart" and she takes from this that "ill health can be averted by the cultivation of virtue" (2003: 61). If the chronically angry individual cultivated the virtues of tolerance, calmness, and acceptance, to overcome their chronic anger, not only would they live morally, but their negative health effects would start to recede, and their quality of life would start to improve. She therefore establishes a link between individual flourishing and moral meritoriousness by demonstrating the cultivation of virtue can lead to both.

The naturalism in Swanton's account can be observed through the fact that her account of human goodness bears a resemblance to Foot's account of natural goodness. The prudential, non-moral components Swanton identifies are necessary for an individual to thrive and have a good life may be seen as analogous to Foot's natural necessities, and Swanton's recognition of the necessity for moral meritoriousness and Foot's argument that rational capability leads to a preference for virtue both stipulate a good life requires some type of moral behaviour which is best achieved through virtue. The similarity between the two accounts is evident, yet they are not identical as Swanton's prudential condition specifically identifies the necessity for individual happiness, whereas Foot's natural necessities identifies necessary capacities such as the ability to imagine and communicate. Despite this, it is clear that Swanton has conceived human goodness in terms of natural functioning[8], she has just formulated a slightly different account to Foot's.

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[8] An argument that is further supported by the fact that Swanton establishes virtue facilitates healthy physical and psychological function, framing it as a naturally beneficial behaviour that leads to a good life.

Swanton concludes stating: "mature, healthy agents characteristically derive personal satisfaction from morally meritorious behaviour which springs from virtuous character" (2003: 62). She adopts the Aristotelian position that virtuous actions are themselves inherently pleasurable and the well-developed truly virtuous individual takes pleasure in doing them, thus establishing that virtuous behaviour fulfils both requirements of a good life — personal satisfaction and moral meritoriousness — and resolves any perceived conflict between the two conditions.

3.2 Transcendental Virtue Theories

Transcendental virtue theories are characterised by an adherence to an external, transcendental ideal of moral goodness. These theories retain the characterisation of virtue as excellent character traits; however, the value of these excellent character traits is no longer derived from them being identified as naturally beneficial qualities that lead the agent to a good life. They instead derive the value of the virtues from their ability to best represent these transcendental ideals within individuals. This section will now characterise three dominant transcendental virtue theories: Platonistic, Divine, and Exemplarist.

An account of Platonistic virtue is formulated by Sophie Grace Chappell (2014)[9] who presents its main premise as follows: "PVE: Good agency in the truest and fullest sense presupposes the contemplation of the Form of the Good" (2014: 296). A Platonic Form is a perfect representation of an idea that transcends the physical world, for example there are the forms of beauty or cowardice. Individual contemplation, individual actions, and physical representations can all portray aspects of a form and how well these instances represent the form determines how much of the form it displays, but they can never encapsulate the entire form, which exists as a transcendental ideal. Chappell's contention is that contemplation of the form of the good can lead to moral goodness.

Chappell recognises that this initial premise's stipulation that moral goodness involves contemplation the form of the good does not explicitly mention virtue (2014: 296). However, Chappell establishes that according to Plato contemplating the form of good

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[9] Other accounts of Platonistic Virtue are provided elsewhere, such as Iris Murdoch's exposition in *The Sovereignty of Good*, but Chappell's account shall be formulated here given the concise understanding it presents.

"causes and expresses in us the four cardinal virtues that he [Plato] recognizes - wisdom, justice, courage, and temperance" (2014: 296). Chappell elaborates that Platonic Virtue Ethics emphasises and justifies goodness agency over right action because contemplation of the form of the good reveals that good agency is a more prior and basic concept. According to Plato rightness "is simply perfect goodness applied to the world's indefinitely many contingencies; it thus 'partakes of the indefinite' in a way that goodness does not" (2014: 296). The cultivation of good character, or 'virtue', produces rightness in most situations, whereas the cultivation of rightness produces goodness in single situations, the cultivation of good character is therefore a better expression of the form of the good.

Finally, Chappell establishes that the idea of "agency guided by the contemplation of the Form of the Good is the ideal case of good agency" (2014: 297). Given that the form of the good represents an unattainable transcendental ideal which the individual will never fully instantiate, Chappell recognises "this is set as a *target* for good agency not a baseline" and individuals can be considered virtuous if they sufficiently approximate this ideal (2014: 297).

Divine virtue ethics is formulated by Robert Adams, who states: "God is the supreme Good, and the goodness of other things consists in a sort of resemblance to God … The type of good principally exemplified by God, as transcendent Good, is intrinsic excellence" (2002: 8). He continues, claiming that the intrinsic excellence that most closely resembles God's is the possession of excellent character traits and Human goodness is achieved through virtuous behaviour as it is the closest emulation of God's excellence that we can express (2002: 42). Adams elaborates that human goodness cannot match the excellence of God, claiming: "no good that we can do is commensurate with the transcendent Good" (2002: 9), so our actions must be understood in terms of being *for* the good. If our actions sufficiently display that they are for the good, then they can be considered excellent, or virtuous enough.

A variation of Divine Virtue is presented by Zagzebski (1998) who returns to the argument that motivation is the most basic component of virtue, this time making the motivations of God the foundations of moral value. Zagzebski makes a similar claim to Adams in that God is the ultimate representation of good, possessing perfect and complete virtue which can be used as a model for moral action (1998: 539). Therefore, to live a morally good life the individual must emulate the virtuous motivations of God. Again, Zagzebski recognises that

us 'finite and embodied beings' cannot hope to get close to the excellence of God so we must be 'virtuous enough' (1998: 540).

Finally, Zagzebski makes another contribution to the Transcendental Virtue Theory wheelhouse, formulating Exemplarist Virtue Theory, which is "grounded in exemplars of moral goodness, direct reference to which anchors all the moral concepts in the theory" (2010: 41). Moral exemplars are identified as paradigmatic examples of virtuous behaviour and subsequently used as templates for virtuous behaviour. Exemplars are identified through the emotion of admiration which Zagzebski justifies the use of, stating: "the emotion of admiration is generally trustworthy when we have it after reflection and when it withstands critique by others" (2010: 52). Admiration must be felt after the individual has fully considered the properties the exemplar possesses and after the exemplar has survived criticism by an external point of view. Virtue is introduced because admiration identifies virtuous character traits as valuable, so, to imitate the admirable exemplar, the agent must similarly display virtue. From this, Zagzebski defines virtue as "a trait we admire in an admirable person. It is a trait that makes the person paradigmatically good in a certain respect" (2010: 54).

She continues characterising Exemplarism, stating exemplars can be both real or fictional (2010: 51) and "there can be exemplary acts and exemplary lives" (2010: 54). These qualifications enable there to be no upper limit on the exemplary display of virtue. For example, God could again be used as an exemplar, or Martin Luther King Jr.'s acts could be used as an exemplar of courage[10]. These qualifications entail that, again, the individual cannot always act at the same standards as the paradigmatic exemplar. Zagzebski therefore specifies a right act "is what the admirable person would take to be most favoured by the balance of reasons in circumstances" (2010: 55). She does not specify that the individual must match the exemplar's virtuous effort, just that they should match the exemplar's choice to respond virtuously.

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[10] Given the reliance on an agent that functions as a role model, parallels can be drawn between Zagzebski's exemplarism and Hursthouse's Qualified Agent theory. However, the difference lies in that Hursthouse's qualified agents are real life role models known to the individual (1999: 35), meaning the emulation of their virtue is usually attainable. Whereas Zagzebski's exemplars exist as real and fictional paragons of virtue, meaning the direct emulation of the exemplars is generally unattainable.

3.3 Consequentialist Virtue Theories

Julia Driver presents a consequentialist account of virtue in response to challenges she formulates to the Aristotelian understanding of virtue. Specifically, that Aristotle's virtue necessitates the possession of appropriate knowledge — such as understanding what constitutes virtuous action — and the necessity of the possession of practical wisdom (2001: 2-4), yet there are some virtues, such as modesty, blind charity, impulsive courage, and some forms of forgiveness that either do not "require that the agent know what she is doing right or, worse, that actually requires that the agent be arrogant" (2001: 16)[11]. Driver therefore contends that virtue does not require the level of epistemic awareness established by Aristotle (2001: 41).

She extends her criticism of Aristotelean virtue, claiming that the possession of 'good intentions', or deriving pleasure from virtue, are not necessary for virtue (2001: xvi). She argues that "having objectively good intentions require that an agent have correct beliefs regarding what is valuable – a tall order for most persons who have beliefs that are often heavily influenced by the fallible mores of human society" (2001: xvi). The Aristotelian conditions for good intentions necessitate a perfect upbringing as any small flaw in our objective understanding of the world will generate false views of value, a perfect upbringing for virtue is not possible for most people, thus making the stipulation of having good intentions too elitist (2001: 54). As an individual's emotional reactions to virtue will equally be informed by their environment, then it is likely these too will not align with the correct objective disposition towards what is valuable, thus making the Aristotelian prescription of virtue requiring a harmonious emotion reaction equally elitist.

Driver then recognises that we still attribute virtue to acts regardless of motivation. Using the example of Huckleberry Finn, she argues that we would identify the saving of his friend was virtuous, but his beliefs and motivations in doing so were often misguided and wrong, and therefore Finn's virtue is an *uneasy* virtue (2001: xvi). This culminates in her view that whilst some internal states may be important for some virtues, such as the genuinely

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[11] Driver provides full discussion and justification of why an accurate portrayal of each 'virtue of ignorance' necessarily requires ignorance of the reasons for action (2001: 16-41). However, for the sake of brevity, such discussions cannot be explored here.

generous requiring an understanding that they are helping the needy, "none of those internal qualities traditionally associated with virtue is necessary for it" (2001: xvii)[12]

For Driver then, "A virtue is a character trait that leads to good consequences systematically" (2001: xviii). The condition 'systematically' enables character traits that usually produce good consequences to be considered virtues, even if for reasons of moral luck or extremely difficult moral dilemmas, they do not produce good consequences on a particular occasion. It also excludes bad character traits that may occasionally lead to good consequences from being considered virtues. For example, lying may enable an individual to save face and save an individual from a terrible truth on one occasion, but lying generally tends to produce bad consequences, so cannot be considered virtuous. This enables the display of good character traits to be considered virtuous, without reference to internal states, thus avoiding the problems she identifies in her criticism.

From this, it is clear to see that for Driver, the value of virtuous traits "resides in their tendency to produce good consequences" (2001: 63). She further clarifies the nature of the consequences good character traits are intended to produce by determining that her account adopts an objective consequentialist approach - defining the virtues as character traits that systematically produce *actual* good, rather than the good perceived by the individual (2001: 68). To promote 'actual good' Driver has in mind that the "virtues function in social contexts to contribute to human (or social) flourishing and happiness, often by alleviating interaction problems among people" (2001: 74). Using the example of trustworthiness and honesty, she claims they make social interactions possible as people can coordinate their activities, and ensure they will be carried out, thus promoting social good. Taken alongside the fact that Driver also recognises "'excellence' or 'virtue' is analogous to the biologist sense of 'fitness'" (2001: xvii), these claims that the good consequences produced by virtue contribute to flourishing and happiness by facilitating

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[12] These criticisms that found Driver's argument provides context for why Driver has formulated virtue in the way that she has, and will also be useful for the discussion of the relationship between virtue and emotion in the following section. However, they are not necessary for the characterisation of the mechanics of the theory, which is the current focus of this section, so they will not be examined any further.

cooperation indicates Driver has in mind a Footian naturalistic foundation for good consequences[13].

Finally, Driver establishes that individual virtue is judged through *direct* objective consequentialism. Direct consequentialism "holds that the thing to be evaluated is evaluated in terms of its own consequences", unlike indirect consequentialism which "holds that the thing to be evaluated is evaluated in terms of the consequences of some related item" (2001: 71). Whereas indirect consequentialist virtue might judge the moral quality of an action by the consequences produced by the virtues guiding them, direct consequentialism determines "character traits are simply another thing that, like action, can be evaluated along consequentialist lines" - the value of a virtuous action is therefore directly determined by the consequences it produces (2001: 72).

She argues the direct approach is preferable as it allows room for virtue evaluation whilst enabling a more nuanced response to hard moral cases (2001: 72). She demonstrates this through the example of a sheriff who must choose between saving an innocent man, or letting twenty innocent people die in an ensuing riot (2001: 72). The indirect virtue consequentialist might recognise that whilst sacrificing one to save many produces the best consequences, it is incongruent with virtue and thus wrong. Whereas the direct consequentialist would recognise that sacrificing the individual is the best thing to do, whilst doubting the character of the individual who would do it[14]. Driver argues the indirect approach therefore captures the ambivalence of the morality of the case, whilst the direct approach simply makes a wrongness judgement based on virtue (2001: 72).

3.4 Naturalistic, Transcendental, and Consequentialist Virtue, and Emotion

Now that an understanding of the different formulation of virtue has been established, this section will examine each of their relationships with emotion, to determine which account of virtue could turn out to be incompatible with the nature of emotion.

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[13] Driver further recognises that because goodness is determined by objective environmental fit, virtue is contextually determined on her account (2001: xvii).
[14] It is important to note that this virtue judgement makes no mention of internal disposition, just references the state of the individual's character.

The necessity of an appropriate emotional reaction within Naturalistic Virtue Theories is displayed in each characterisation. Hursthouse's fourth premise of Qualified Agent virtuous action determined the agent must act from the appropriate emotional disposition, and analysis revealed this necessitated the emotion must also be experienced to the appropriate degree (1000: 125). Similarly, Swanton's Pluralistic Theory characterised virtue as a disposition of well-ordered reason and emotion (2003: 8) and that 'good enough' virtuous behaviour required the experience of relevant fine feelings (2003: 26). Emotion can therefore be seen to play an important role within these theories as it is established as a necessary component to display that the individual feels the right way about virtue and is therefore committed to the virtuous behaviour, and it also displays that the individual gleans the appropriate pleasure from virtuous behaviour. The relationship between virtue and emotion is even stronger in Slote's Agent-Based Theory as he claims that virtue is expressed through a caring motivation (2001: 136) and discussion identified compelling empathic emotion to be the foundation of a caring motivation. Therefore, Slote's theory is directly grounding virtue in appropriate emotion.

Emotion can also be considered to play an important role in Transcendental Virtue Theories. This is best exhibited by Zagzebski's divine motivation theory, in which she identifies that virtue is displayed through emulation of the motivations of God. It has already been established that Zagzebski takes emotions that compel actions to constitute motivation, so for her, emulation of the motivational emotions of God constitutes the path to moral goodness. Whilst no explicit reference to appropriate emotional disposition is made in the formulation of Platonistic, Divine, and Exemplarist virtue theories, these theories do commit to the idea of virtue as admirable character traits, a general understanding of which often stipulates appropriate emotional alignment is a necessary feature of virtue, for reasons established in the previous paragraph. So, appropriate emotional alignment may be taken as given when such transcendental theories refer to virtue.

Also, it is possible to assume that the individual's representation of transcendental moral goodness motivates individuals to act from an appropriate emotional state. Again, because emotional alignment with virtuous action demonstrates a genuine commitment to the value of the behaviour, emotion displays individuals are truly committed to the representation of the good, which would subsequently be maximising their representation of the

transcendental good. Therefore, it can be assumed that the remaining transcendental virtue theories also require appropriate emotional alignment.

The characterisation of Consequentialist Virtue in the previous section began with an exposition of Driver's critique of Aristotelian virtue, in which she argued that an individual's reason, intention, and *emotion* need not align with virtue for the individual to be considered virtuous. This argument informed the construction of her account of virtue, and as such, Driver's formulation of virtue as a 'character trait that leads to good consequence systematically' does not necessitate any sort of emotional alignment with virtue[15]. As emotion is not a necessary component for consequentialist virtue, no account of the nature of emotion would pose a threat to the theory, thus assessment for compatibility with disgust is not necessary.

Whilst both Naturalistic Virtue Theories and Transcendental Virtue Theories necessitate an appropriate emotion reaction for virtue, a difference can be observed in their foundational justification of the value of virtuous behaviour that positions the nature of emotion right at the heart of naturalistic virtue theories in such a way that entails significant problems would arise should it transpire it is incompatible with the nature of emotion.

Transcendental Virtue Theories justify the value of virtuous behaviour by identifying it is the best way to instantiate whichever conception of transcendental goodness they adopt. Within this, given the loftiness of the good striven for, transcendental virtue ethicists recognise the ultimate expression of transcendental goodness is never attainable through human activity. Chappell recognises the form of the good is a target, not a baseline (2014: 287), Adams recognises our action are for the good (2002: 9), Zagzebski recognises we can be 'virtuous enough' (1998: 540), and Zagzebski also acknowledges we only have to match a moral exemplar's intentions, not actions (2010: 55).

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[15] Driver does recognise that some inner states must be necessary for particular virtues, citing the example that genuine generosity may require realisation that one is helping the needy (2001: xvii), but this suggests an understanding of the situation and reasoning for helping the needy is necessary, not necessarily an emotional response to the needy individual. Furthermore, Driver identifies that this only applies to *some* virtues, so even if they did require appropriate emotional sensitivity, this is not ubiquitous across all virtues, and Driver makes it clear it is not a necessity.

Two things can be drawn from this, first, as the goodness instantiated through virtue is fundamentally unattainable, ours must therefore be a 'good enough' expression of goodness in which the individual does not have to display perfect virtue and a threshold of 'virtuous enough' behaviour must be established. Second, this does not make any prescriptions regarding the necessity of the psychological realism of each theory's presented understanding of virtue. In fact, given the lofty nature of the goodness the virtues are fulfilling, a psychologically perfect instantiation of virtue may be an unreachable goal to strive for in the same way we strive for transcendental good. A recognition of human fallibility in the face of transcendental good entails recognition that sometimes flawed 'finite and embodied' individuals will act from the wrong reason or wrong motivation, but we can still be considered 'virtuous enough' if we strive to act from appropriate reason and emotion as much as possible in our limited state. Consequently, whilst possessing perfectly ordered emotion, reason, and action is a desirable goal, as this constitutes the best instantiation of transcendental goodness, it is not a necessity within Transcendental Virtue Theory.

The threshold of 'good enough' virtue can therefore be considered to be a psychologically realistic instantiation of virtue within which the individual has tried their best to be virtuous. This consequently entails that the nature of emotion is of no issue to Transcendental Virtue Theories because, regardless of the characterisation of the emotion and its subsequently effect on the individual's cognition or their capacity for virtue, individuals can still be considered 'virtuous enough' provided the individual tries their best to be virtuous.

On the other hand, Naturalistic Virtue Theories justify the use of the virtues by identifying them as the essential components necessary for humans to live well naturally. By making this claim that the virtues facilitate an optimal natural state, the virtues must be psychologically realistic and achievable to demonstrate this understanding of natural goodness is an achievable natural state and therefore a coherent concept. This consequently implies that the Naturalistic Virtue Ethical characterisation of emotion as virtue responsive and consistent (which the start of this section explained is an integral feature of virtue) *must* be psychologically accurate for this account of virtue to work[16].

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[16] It may be contended here that because Swanton also acknowledges virtue is a 'threshold concept', her theory does not have to adhere to the same conditions of consistent emotional alignment with

Therefore, alignment with the nature of emotion is necessary for Naturalistic Virtue Theories, else it will transpire the naturalistic account of virtue and goodness is flawed [17].

Before concluding, it is worth identifying the two types of problems incompatibility with the nature of emotion could cause for Naturalistic virtue theories. First, it could demonstrate that it is impossible for the individual to experience consistent virtue-appropriate emotional reactions which entails that individuals are incapable of instantiating the appropriate emotional disposition necessary for virtue. This creates a *practical* problem as it establishes that virtue is impossible to achieve. Second, because natural goodness intends to describe the optimal natural state for individuals, this entails it should be a psychologically realistic and achievable state. An incompatible account of emotion would demonstrate that the Naturalistic Virtue Ethical conception of virtue is psychologically unrealistic, and because virtue defines natural goodness, this consequently entails that their conception of natural goodness is psychologically unrealistic and therefore reveals natural goodness to be a flawed concept. An incompatible account of emotion could therefore also cause *metaethical* problems — demonstrating issues with the foundational justification for virtue. Incompatibility with the nature of emotions therefore has the potential to cause *significant* issues for Naturalistic Virtue theories, challenging both the practical capacity for virtue and the consistency of the idea of natural goodness itself.

Overall, as discussion has determined Consequentialist and Transcendental Virtue Theories have no compatibility issues with the nature of emotion, but significant issues may arise should it transpire that Naturalistic Virtue Theories are incompatible with the nature of emotion, Naturalistic Virtue Theories will be the focus of this thesis.

4 Naturalistic Virtue and Disgust

This section will now establish disgust's relationship with virtue through a review of the normative arguments surrounding disgust's relationship with morality. Given that recent account of the function and behaviour of disgust have led various scholars to question the

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virtue. However, this necessitates a commitment to a limited account of virtue which discussion in Chapter 6 Section 3.3.3 will identify irresolvable problems with, so Swanton's account cannot avoid this stipulation of psychological reality using this argument.

[17]A further implication of this necessity for psychologically realistic virtue is that the other features of virtue — for example, the ability to consistently reason and act appropriately virtuously — also need to be psychologically realistic.

appropriateness[18] of disgust's involvement in moral judgements, this section will begin by examining whether disgust has a justifiable place in morality and moral decision making. From this, it will be concluded that disgust can justifiably be considered to communicate aesthetic moral judgements. This section will then use this outcome, and the relationship established between Naturalistic Virtue and emotion presented in previous sections of this chapter, to situate disgust within Naturalistic Virtue Ethics as an aesthetic moral reaction to displays of vice.

Disgust's place in morality has been called into question by scholars such as Nussbaum (2004, 2010) and Kelly (2014: 163), who argue the emotion dehumanises people, leading to stigmatisation, prejudice, and oppression. Evidence supporting this claim is drawn from pre-existing theories of the function and behaviour of the emotion, such as Daniel Kelly's (2011) account[19], and supporting studies that demonstrate a connection between disgust and social prejudices. For example, Inbar et al. (2009a) and Inbar et al. (2012) identified disgust sensitivity predicts intuitive disapproval of homosexuality, Navarrete and Fessler (2006) found ethnocentrism and xenophobia correlates with disgust sensitivity, Vartanian (2010) determined disgust is a strong predictor of negative attitudes towards obesity, and Dawydiak et al. (2020) found that pathogen disgust sensitivity predicts stigmatisation of individuals with mental health conditions. As dehumanisation is taken to occur as a consequence of disgust's effect on cognition, or, in Kelly's words, dehumanisation "flows from the nature and operation of the emotion itself" (2014: 163), whenever it occurs in or alongside moral situations it will cause immoral evaluations of situations, and potentially lead to immoral action. It is consequently deemed unsuitable for use in moral judgements.

The connection between disgust and dehumanisation is however contested by Clark and Fessler (2014) who challenge the strength of the evidence supporting the claim that disgust causes dehumanisation. They identify that most studies specifically connecting disgust to dehumanisation are qualitative - consisting of case studies and historic examples (Nussbaum 2004, 2010) (2014: 487) - and the little empirical support of the connection (Buckels and Trapnell 2013) can be reinterpreted to suggests dehumanisation "may be a more general

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[18] 'Involvement' could refer to disgust occurring as a moral reaction to something, or motivating a moral response.

[19] For the sake of brevity, a characterisation of this account shall not be presented here.

and fundamental part of our group psychology, rather than being disgust specific" (2014: 487). They also cite further evidence from Giner-Sorolla and Russell (2019) that demonstrates anger, disgust, and fear all also contribute to dehumanisation (2015: 488), so disgust is not uniquely involved in dehumanisation.

Clark and Fessler continue to challenge disgust's association with dehumanisation by recognising the connection between disgust and dehumanisation first occurred after the formation of Rozin et al.'s (2008) influential 'animal reminder' account of disgust in which it was postulated disgust occurred towards reminders of animality to symbolically mark social boundaries, this fulfilled one of the functions they identified for disgust — guarding against existential terror. However, Clark and Fessler identify that this 'animal reminder' account has since been heavily criticised (Chapman and Anderson 2013) and now most evolutionary theories of the emotion have moved away from this idea (2014: 487), so it is unclear to what extent disgust responds to animal reminders and potentially causes dehumanisation.

Finally, they challenge the argument that disgust dehumanises through a critique of the idea of dehumanisation. They identify that whilst 'dehumanisation' is primarily understood as seeing humans as animals rather than their human selves, use of the concept ranges over many different theories of human/animal nature and many types of human/nonhuman construal that do not make animal associations at all[20]. Therefore, 'dehumanisation' "depends greatly on which features of the target and animal are in question" (2014: 488), A variable that was perhaps not specified in the disgust-dehumanisation association tests, so it will be unclear what form of dehumanisation occurs[21]. They also question the belief that associating humans with animals as inherently negative, for example, we often positively appraise animals, referring to the noble lion or graceful gazelle (2014: 488). This point that can be extended by also recognising we often use animalistic similes to refer to positive character traits, identifying someone to be as wise as an Owl or as strong as an Ox,

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[20] For example, "''super humanization'' involves comparisons with either favourable [e.g., angelic] or unfavourable [e.g., demonic] traits, or degrees of traits, associated with gods or other superhuman entities" (2014: 488).

[21] They also establish that this matter is further complicated by the fact that perceptions of human/animal boundaries vary greatly between cultures and individual groups, for example, pets are often considered "sentient selves" and valued members of the family (2014: 488).

demonstrating that we in fact value some animalistic quality and it is not clear that 'dehumanisation' is inherently negative.

This critique consequently demonstrates that a lack of specificity in the concept of dehumanisation makes it unclear what is meant by dehumanisation, or what occurs when we dehumanise, and it is unclear whether there is implied negativity when we make animal associations. Clark and Fessler take this to indicate that "that the phenomena commonly termed dehumanization are unlikely to involve simply a matter of turning off social cognition in response to perceived animality" (2014: 288), and from this conceptual uncertainty it can be questioned whether there is any weight to the criticism that disgust causes dehumanisation.

When taken together, the facts that there is shaky evidence that dehumanisation is unique to disgust or that disgust triggers dehumanisation at all, it is connected to disgust as a result of a now defunct understanding of the emotion, and that dehumanisation itself is a vague, problematic concept, provide a compelling reason to dismiss the argument that disgust causes dehumanisation and should therefore be dismissed from use in moral judgments.

To support disgust's role in moral judgments and moral decision making, Clark and Fessler also identify that disgust is involved with moral judgements we deem valuable, identifying "disgust has also been shown to support moral practices that most readers would endorse, such as condemnations of hypocrisy, lying, unfairness, betrayal, disloyalty, and even towards the very behaviours that are sometimes seen as selectively reinforced by disgust, such as disgust towards racism, homophobia, and ethnic persecution" (2014: 486). Consequently, when we recognise disgust does not dehumanise and seems to play a role in the condemnation of behaviours we deem as vices, disgust can be seen to retain a relevant place in moral judgments.

Despite claiming that disgust causes dehumanisation which has subsequently been dismissed, Nussbaum's (2004) also argues that feelings of disgust put us in conflict with our physical bodies as it reminds us of death. We subsequently project this discomfort onto others when they disgust us which leads to us making more severe moral judgements, treating targets of disgust unfairly and unethically. Consequently, she believes feelings of disgust should be removed from moral decisions, legal decisions, and decisions made by

social institutions. Kelly identifies a similar effect, arguing that disgust originally evolved as an aversive response to poison and parasite threat, and was then co-opted into fulfilling a social function (2014: 157) as such moral violations are also conceptualised as revolting and trigger a reaction disproportionate to the violation. Here, Nussbaum and Kelly have identified a troubling instance in which the interference of disgust could lead to immoral behaviour - if the aversive effects of disgust influence cognition to cause an immoral overreaction - and provide potential grounds for dismissal from moral judgements.

However, this severe aversive component can be appropriately placed in moral disgust after consideration of Michael Hauskeller's (2006) argument for disgust's inclusion in morality. Hauskeller argues that disgust is an appropriate emotional reaction to severe moral transgressions, stating: "there are some actions that are not merely morally wrong, like, say, theft or breaking a promise, but rather *more* than just morally wrong" (2006: 586). For instance, to say the cold-blooded murder of an innocent child is morally wrong does not fully capture the atrocity of the act. Although it is possible to explain the wrongness of this act in simple moral terms (like violations of harm and fairness) a disgust response has a place as it "draws our attention to the fact that there is something (terribly) wrong in the first place, or makes us aware that the *kind* of wrongness we are dealing with surpasses what can be accounted for by established moral theory" (2006: 571). The aversive element of the reaction Nussbaum and Kelly identify as unnecessary could therefore appropriately indicate our repulsion to the deed, and the exacerbation of the judgement caused by the disgust is appropriate in this instance given the abhorrent nature of the act.

The necessity of severe aversive disgust reactions to heinous moral transgression also seems intuitively compatible with Naturalistic Virtue Theories given that they necessitate an appropriate emotional reaction in moral situations. In certain severe situations moral disgust is a virtuous response as simply understanding why the act is bad and not experiencing a strong emotional reaction to it may signify the individual does not grasp the severity of the transgression. Experiencing intense moral disgust signifies the individual empathises with the victim, understands the severity of the transgression, and possesses the virtue of compassion.

An important point can be raised here in that it would depend on the eliciting circumstances as to whether this aversive reaction would be appropriate. For example, if

the sadistic nature of a murder triggered this strong aversive reaction it would be an appropriate moral reaction. However, if a strong aversive reaction were triggered in a non-heinous moral violation by the incidental presence of a disgusting entity, for example if someone were morally judging an individual who happened to be covered in vomit and this unnecessarily exacerbated the judgement, this would constitute an inappropriate overreaction. Whilst this identifies a potentially interesting feature of disgust's relationship with morality, one which further empirical examination would be necessary to establish the truth of, this does not necessarily invalidate disgust's place in morality, it simply provides conditions for appropriate and inappropriate disgust influence.

Furthermore, it is not entirely clear that moral disgust reactions necessarily produce aversive overreactions in the way described by Nussbaum and Kelly. Consider Iskra Fileva's example of Paul "a man who steals money left by his parents for his new-born baby and who squanders it on gambling and alcohol" (2020: 1). Intuitively, it seems reasonable to call Paul's behaviour disgusting, but this judgement does not necessarily induce the physically aversive response described by Nussbaum and Kelly that unfairly exacerbates judgements. Therefore, it seems possible to experience appropriate moral disgust in instances such as this. Again, this fits with the Naturalistic Virtue Ethical perspective on emotion, as whilst disgust may be the necessary emotional reaction in such instances, it does not seem necessary to respond with an intense aversive reaction to such a transgression.

Fileva's own account of disgust's moral function can be seen to offer a compelling challenge to Nussbaum and Kelly's position, and a viable explanation of disgust's relationship with morality. She argues that there exists a flawed 'binary choice paradigm' in which we must assume moral disgust is "qualitatively the same as that of physical disgust or else it is not a variety of disgust at all" (2020: 9). Whilst Nussbaum and Kelly do not challenge the existence of moral disgust and are instead concerned with the nature of moral disgust reactions, they have made the assumption that moral disgust reactions must resemble physical disgust reactions and share their cognitive characteristics.

Fileva proposes moral disgust be considered an "*aestheticized moral reaction*" (2020: 9). She recognises that by calling moral disgust an aesthetic reaction, it is possible to assume we are speaking metaphorically, entailing moral disgust has no moral weight (2020: 8). However,

she argues we make no such metaphoric assumptions about prescriptions of beauty or ugliness which are also utilised in various contexts (such as sensory beauty or a beautiful theory), including moral contexts as we often say, "someone is a beautiful person or that something is an ugly deed" (2020: 8). So, Fileva questions why we must make this assumption of metaphorical use about disgust.

She then qualifies what she means by an *aestheticized moral reaction*, determining it to be a "a form of emotional moral appraisal, similar to such moral emotions as pleasure associated with contemplating the morally beautiful" (2020: 9). Fileva establishes the moral significance of this characterisation by identifying that in aesthetic moral judgments the aesthetic judgement must align with moral judgement as you cannot judge an action morally disgusting but morally fine (2020: 10). This demonstrates disgust is more than just a metaphor as it has the capacity to communicate a moral appraisal and thus possesses a defensible moral authority (2020: 10).

By formulating moral disgust as an aesthetic moral reaction Fileva is proposing it serves a drastically different function and operates in a significantly different domain to physical disgust, from this it is also reasonable to assume they do not share the same qualitative features, including cognitive characteristics. Therefore, moral disgust reactions are not *necessarily* accompanied by the strong aversive reaction attributed to it by Nussbaum and Kelly, and in moral situations such as Fileva's Paul example, aesthetic moral disgust does not have to resemble physical disgust.

Fileva's interpretation of moral disgust may appear to conflict with the previously present interpretation of Hauskeller's argument for moral disgust, as Fileva argues for a qualitatively distinct form of moral disgust whereas the interpretation of Hauskeller's arguments justifies a form of moral disgust that has qualitative features similar to that of physical disgust. However, arguing that disgust specifically responds to heinous moral transgressions can itself be understood as a response to particular aesthetic components of a violation, and therefore constitutes an aesthetic judgement. Despite arguing for qualitative difference, it may transpire that when moral disgust is responding to violations with specific aesthetic features, it recruits components of the aversive physical disgust response to communicate these reactions.

These arguments will be tested in the following chapters when an empirical account of disgust is formulated. But for now, they can be seen to present a viable account of disgust's position in moral judgements and moral decision making, and can be used to situate disgust within Naturalistic Virtue Theories.

To recap, discussion in the characterisation of Naturalistic Virtue Theories identified that virtuous behaviour necessarily required an appropriate emotional reaction, occurring consistently for the right reasons, for the right amount of time, and experienced at the appropriate intensity, and discussion in this section identified that disgust occurred as an aesthetic moral reaction. Fileva's description did not identify a specific form of violation moral disgust specifically responded too, but examination of the examples of moral disgust presented across Clark and Fessler, Hauskeller, and Fileva's work demonstrates moral disgust occurs towards a variety of moral transgressions, with Clark and Fessler generalising and identifying it occurs to displays of 'hypocrisy, lying, unfairness, betrayal, disloyalty'. From this, it can be drawn out that disgust occurs as an aesthetic moral judgement towards any display of immorality, which, in Naturalistic Virtue Ethical terms would make disgust a necessary emotion for virtuous reactions toward displays of vice.

Discussion in this section has also suggested that aesthetic moral disgust has the capacity to occur in degrees depending on the nature of the violation, with moral disgust occurring somewhat in Fileva's Paul example, but intense aversive disgust occurring toward the child killer used in the discussion of Hauskeller's argument. As this demonstrates a capacity to respond appropriately to displays a vice, a feature of emotional reactions necessarily required by virtue, it further suggests the suitability of this function of moral disgust for Naturalistic Virtue Theory.

Finally, it is worth noting the significance of this situation of disgust within virtue theory. Given that it establishes moral disgust occurs towards displays of vice, it makes moral disgust a necessary emotional component in *all* the individual's virtuous reactions towards displays of immorality no matter the significance of the transgression. For example, an individual the moral agent knows to be a trustworthy and generally virtuous person may make a mistake and get caught in a lazy lie in an attempt to save face, on this understanding of moral disgust it is necessary for the agent to feel disgust toward the violation, albeit a miniscule amount because they know this sort of behaviour is out of character for the

individual. Equally, a significant amount of moral disgust is required in the aforementioned guilty child killer example. Therefore, although an incompatible account of emotion would cause problems for virtue theory no matter the significance of that emotions place within virtue[22], because this situates disgust as a necessary component in all negative moral judgements against others, an incompatible account of the psychology of disgust would demonstrate a significant amount of virtuous behaviour is not possible.

5 Conclusion

This chapter began by providing a general description of the virtues — characterising them as admirable character traits that are deep, reliable, and active features of an individual's personality. It then outlined the different theoretical justifications for virtue, and formulated the different accounts of virtue from within each one. This began with Naturalistic Virtue Theories which claimed that the virtues instantiate natural human goodness. Within this; Rosalind Hursthouse's (1999) Qualified Agent theory adopts a Eudaimonic account that describes virtue as appropriate and well-ordered emotion, reason and action; Michael Slote's (2001) Agent-Based Theory defines virtue as benevolent motivation, which analysis revealed consists of empathic emotions that compel action; and Christine Swanton's (2003) Pluralistic account which presents a formulation of natural goodness similar to Foot's, and characterised virtue as the possession of fine inner states and the excellent or 'good enough' response to items within it field.

The explanation of Transcendental Virtue Theories identified that they position virtue as the best instantiation of transcendental goodness, expressed as either the Platonic form of the good (Chappell 2014), the goodness of God (Adams 2002), the motivations of God (Zagzebski 1998), or moral exemplars (Zagzebski 2010). The presentation of virtue theories was concluded with an account of consequentialist virtue formulated by Julia Driver (2001) who critiqued the Aristotelian concept of virtue as necessarily possessing harmonious inner states, and she instead formulates virtue as a 'character trait that leads to good consequences systematically'. Driver subsequently identified that consequentialist virtue

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[22] As any incompatible account of virtue-necessary emotion will demonstrate it is not possible for an individual to act virtuously in the instance that emotion is necessary for.

will be held to an objective standard of goodness and judges virtue through direct consequentialism.

Naturalistic, Transcendental, and Consequentialist Virtue's relationship with emotion was then examined to determine whether any of them could turn out to be incompatible with the nature of emotion. It was identified that because Driver formulates consequentialist virtue without the necessity of internal dispositions — including emotions — aligning with virtue, no account of the nature of emotion would pose a threat to the theory; and because Transcendental Virtue Theories established an unattainable standard of goodness which meant they must commit to a 'good enough' standard of virtue, this entails the capacity for a psychologically realistic instantiation of virtue, and therefore compatibility with the nature of emotion. However, because natural goodness requires the psychological reality of virtue, Naturalistic Virtue Theories require their conception of emotion — a necessary component for virtuous behaviour — to be psychologically realistic. Naturalistic Virtue Theories are therefore potentially incompatible with the psychology of disgust, and will be the focus of the thesis moving forward.

The chapter then engaged with the normative debate surrounding disgust's place in morality and moral decision making to situate disgust in Naturalistic Virtue Theories, first considering whether disgust can have a justifiable place in morality and moral decision making. It presented arguments that disgust causes dehumanisation and should therefore be dismissed from moral decision making, but dismissed these with evidence that challenged the connection between disgust and dehumanisation, and the identification that disgust plays an important role in other, valuable, moral judgements. It then considered the alternative argument that disgust should be excluded from moral judgements as the aversive characteristics of disgust caused immoral overreactions and led to unfair judgments. This was recognised as justifiable worry in certain situations, but a strong aversive reaction was justified as necessary in instances of heinous moral violations. This section also established the possibility of moral disgust without the strong aversive component attributed to physical disgust reactions, and determined these could be understood as aesthetic moral judgements. The chapter concluded by using this discussion to situate disgust within virtue as an aesthetic moral reaction to displays of vice.

Now that a solid understanding of virtue has been established; the field of investigation has been narrowed by identifying that Naturalistic Virtue Theories could turn out to be incompatible with the nature of emotion; and disgust has been situated in virtue as an aesthetic moral reaction to displays of virtue, the necessary step to frame the thesis have been completed. The following Chapters Two and Three will now establish an account of disgust suitable for compatibility assessment with Naturalistic Virtue Theories.

Chapter Two – The Evolutionary Origins and Functions of Disgust

1 Introduction

The following two chapters shall formulate the Dual Mechanism Theory - an original account of disgust that claims it consists of two independent mechanisms: the physical disgust reflex, and the emotion of social disgust. Using recent development in empirical literature and evolutionary theory, the account will be constructed from the ground up: beginning with an account of the evolutionary origins of disgust and the function of each established mechanism in this chapter, then describing the behaviour and cognitive characteristic of each mechanism, the nature of disgust elicitation and elicitor acquisition, and explaining the emotion/reflex distinction in the following chapter.

This chapter will begin by recognising the existing work on disgust and explaining the Dual Mechanism Theories' relationship to this through a discussion of method. It will then discuss the evolutionary origins of disgust, presenting arguments that disgust evolved from a single contamination avoidance pressure (Kelly 2011), or from both a physical contamination avoidance pressure *and* a social regulatory pressure (Rottman et al. 2018). Evidence will then be presented that Rottman et al.'s (2018) social origins hypothesis better fits the evolutionary theory, empirical data, and developmental data on disgust, so the Dual Mechanism Theory shall adopt Rottman et al.'s perspective on the evolutionary origins of disgust.

Despite dismissing Kelly's account of disgust's evolution, his work still provides a useful background on the physical disgust mechanism, and will as such be used to establish its evolutionary origin – determining that it facilitates poison and parasite avoidance. Kelly's account shall also be used to identify elicitors that trigger the mechanism. Rottman et al.'s (2018) work will then be used to establish that the social disgust mechanism functions to enforce social boundaries through rejection and stigmatisation of outgroup members. How exactly social disgust enforces social boundaries will be established by sociofunctionalist analysis of the difference between disgust and anger, which identifies that social disgust responds to signs of negative character traits the individual disapproves of. This sociofunctionalist analysis is also necessary to address the argument that social disgust is just a synonym for anger.

The chapter will conclude by recapping the findings presented in the chapter and then make some preliminary remarks about why the two can be identified as separate mechanisms, a thread that will be continued in the following chapter.

2 A Note on Other Theories

Before beginning the account, it is worth recognising that a variety of disgust theories already exist that could be used as a suitable characterisation from which to examine its relationship with Naturalistic Virtue Theories, and it seems necessary to explain why these will not be utilised by the thesis.

Given their claims that virtue instantiates natural human goodness, the Naturalistic Theories in question can be understood to have positioned virtue as our evolved natural state. As such, it seems appropriate to develop an account of disgust on similar grounds, determining its evolved natural function, as this will enable direct examination of whether disgust can contribute to our evolved natural function as outlined by Naturalistic Virtue Theories. The account will therefore be developed from the ground up, initially determining its evolutionary origins, then its function and behaviour.

Some established theories, such as Giner-Sorolla et al.'s IFT, provide a purely functional account of disgust. So, whilst they may be useful for determining behavioural characteristics, they do not provide an account from the perspective ideally suitable for the intentions of this thesis, and shall not be used as a characterisation of disgust[1]. Other established Theories, such as Tybur et al.'s (2013) account, Rozin et al.'s (2008) account, and Kelly's (2011) account, do formulate a version of disgust with an account of evolutionary origin, so may be suitable. However, recent developments in the literature on the evolution of disgust suggest an alternative evolutionary route to the ones proposed by these scholars. So, whilst these existing theories will be utilised where appropriate, the Dual Mechanism Theory intends to formulate an original account of disgust, one that better fits the available data.

3 The Evolutionary Origins of Disgust

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[1] This reason is accompanied by the fact that, in the creation of the theory, the Dual Mechanism Theory presents an account of disgust that differs from the IFT.

The Dual Mechanism Theory establishes disgust's evolutionary origin through a synthesis of Kelly (2011) and Rottman et al.'s (2018) accounts. Kelly proposes disgust initially emerged as an aversive response to poison and parasite contamination threats to the organism. Then, as humans evolved and the development of complex social relationships generated the need for social regulatory behaviours, he claims features of the disgust reaction made it a prime candidate for co-option to serve an auxiliary social function (2011: 117-119) and it was thus recruited to enforce social norms (2018: 108-111) and ethnic boundaries (2018: 111-116).

Rottman et al. argue that physical contamination protection accounts for half the story of the evolutionary origin of disgust, and claim an equally significant social pressure was exerted that concurrently influenced its development (2018: 38). Alongside the physical component, they argue social pressure led to disgust developing into an emotion that enforces social boundaries by maintaining the values and traditions of the in-group and rejecting and stigmatising the out group (2018: 42).

Whilst both Kelly and Rottman et al. agree that disgust serves both a physical and social aversion function, a difference in views can be identified here as Rottman et al. identify social pressure exerted on the development of disgust from the beginning of its evolution, meaning the social function developed concurrently with its physical function, whereas Kelly argues disgust co-opted a social function after fully developing a physical mechanism. Before the theory can be developed any further it will be necessary to determine which provides the most compelling picture, which will be done in the following section[2].

3.1 The Social Origins Hypothesis vs The Physical Origin Hypothesis

This section will argue that Rottman et al.'s social origins hypothesis provides a more compelling explanation of the evolution of disgust. This shall be done through a presentation of Rottman et al.'s work that identifies discrepancies in the physical origin

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[2] It is important to note that the outcome of this examination will have significant implications for the structure and behaviour of the emotion as Rottman et al.'s account suggests disgust emerged as two separate mechanisms and may have subsequently entangled, and also suggests the social feature of disgust may have had more time to develop and thus formed more distinct features, whereas Kelly's co-option hypothesis suggests a singular mechanism that utilises the existing features of physical disgust to responds to social violation, entailing the social feature is less distinct.

hypothesis which show its account of the evolution of disgust is incomplete, then an exploration of how incorporation of the social origins hypothesis makes up for these discrepancies and provides a better fit for the current data.

Rottman et al. begin by demonstrating that there is little empirical evidence for a strong relationship between disgust and disease (2018: 38). Citing De Barra et. al. (2014) who did not find evidence for a positive correlation between disgust sensitivity and increased health outcomes, Curtis et. al. (2000) who show disgust does not always motivate disease avoidant behaviour, and Speth (2017) who identifies that characteristic parasitic disgust elicitors - putrid meats - are important sources of nutrition for many hunter gatherer societies, and fermentation (the organic decay of foodstuffs) is a key process in lots of different food making processes. They do identify studies (Deacon and Olatunji 2007) acknowledging the connection between disgust and disease (2018: 39), but argue the empirical picture is not as strong as one would assume it would be if disease avoidance was disgust's primary motivation and are therefore sceptical that it constitutes the full story (2018: 41)[3].

Rottman et al. continue, stating: "it is also unclear that disgust is crucial for avoiding contact with non-social disease vectors" (2018: 38) and cite research that suggests fear and anxiety drive disease avoidance alongside disgust (2018: 38). They also recognise that other species have solved the evolutionary problem of poison and parasite aversion without developing obvious disgust mechanisms[4] and comment that because humans did not evolve in conditions any different to other mammals, it raises the question as to why we developed disgust reactions and they did not (2018: 40), again suggesting the physical origin hypothesis alone is an insufficient explanation for the evolutionary origin of disgust .

To conclude their analysis of the physical origin hypothesis Rottman et al. identify humans are most at risk of disease in their first five years, citing Bryce et. al. (2005) who determine pneumonia and diarrhoea[5] are leading causes of death at this age around the world (2018: 40). This suggests that to be maximally effective, disgust reactions should have fully developed before this to adequately defend the individual from entities that cause these

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[3] A weak connection suggests disgust still facilitates disease avoidance, but a direct correlation with his function may have been diluted by disgust fulfilling another function.

[4] Sheep, for instance, evolved a selective foraging mechanism that enables them to avoid contact with potentially disease carrying faeces.

[5] Conditions acquired by parasitic transmission.

diseases. However, they identify evidence from Rozin and Fallon (1987)[6] which shows that disgust develops slowly in children, remaining underdeveloped through much of childhood (2018: 40). They argue that if disgust primarily evolved to avoid physical contamination, then it fails to fulfil this function at the juncture in which the individual is most vulnerable (2018: 40), implying it does not fulfil this primary function well at all and suggesting a further function alters disgust's developmental trajectory.

Rottman et al. then proceed to argue that a social origin is more consistent with the developmental evidence because the "Social Origins hypothesis clearly predicts a slower developmental trajectory" (2018: 49). The social origins hypothesis identifies that "reasoning about social groups and patterns of affiliation … particularly in the context of behavioural regulation and reputation management" (2018: 49) are important foundations for the development of disgust within individuals. As this expresses a more nuanced emotional reaction, the social origins hypothesis predicts disgust reactions develop later in the individual when they are more cognitively developed to process the reaction.

They then demonstrate the development of disgust aligns with the considerations introduced by the social origins hypothesis by showing that the age at which children begin to develop aversions to outgroup members and become concerned with image and status correlates with the age at which their disgust reactions start to develop (2018: 50). Furthermore, the social origins hypothesis predicts that disgust sensitivity peaks during adolescence "alongside children's increasing contact with non-kin and gradual development of explicit outgroup prejudices" (2018: 51) which House et al. (2020) has also recently provided experimental evidence for. Therefore, accepting social regulation and its attendant developmental predictions as one of the primary features of disgust provides an account that better fits the empirical literature.

Finally, the need for a complex social regulation mechanism may be the evolutionary pressure unique to humans which led to the development of disgust. In a discussion of social norms, Kelly raises the point that humans have the unique ability to "thrive in a wide range of habitats and climates" (2011: 108). To thrive in an adverse habitat, humans need cohesive social structures that facilitate cooperation to maximise chances of survival.

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[6] Which has been corroborated by House et al. (2020).

Rottman et. al. identified social disgust as the mechanism that emerged to maintain adherence to the same values and behaviours and maintain in-group structure, facilitating this group cooperation and survival.

Overall, Rottman et al.'s evidence has presented a compelling argument to accept the social origins hypothesis as the preferred account of the evolutionary origin of disgust[7,8]. It is important to note that this does not outrightly reject Kelly's account, and the following section will establish that Kelly's account can be used as an explanation of the evolution and function of the physical disgust mechanism. Instead, it recognises that the physical origin account does not provide the complete picture of the development of disgust, and an account that recognises social function of disgust began development concurrently with the physical mechanism, rather than being opportunistically co-opted once the physical mechanism had been established, better fits the literature.

Finally, it is worth noting this established pathway of the evolution of disgust implies each mechanism has more time to fully develop into distinct independent reactions, a fact that will be illustrated in the ensuing elaboration of function and behaviour of each mechanism. The social origins hypothesis also begins to demonstrate how, despite sharing a similar function, each component can in fact be identified as a unique mechanism, as they each began with different evolutionary pressures.

4 Physical Disgust

Kelly's (2011) account of disgust shall now be used to establish the evolutionary origin and function of the physical disgust mechanism[9]. He begins his account by presenting the entanglement thesis: "underlying disgust are two distinguishable cognitive mechanisms that

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[7] Their discussion pertains specifically to the evolutionary origins of disgust and does not engage with whether disgust is a unified emotion or in fact consists of two distinct mechanisms, but is compatible with either view. The Dual Mechanism Theory will use Rottman et al.'s work to explain that disgust developed as two separate mechanisms.

[8] The social origin hypothesis is also supported by the behaviour of disgust established in the following chapter. Whilst this does work in the paradigm established in this chapter, it successfully manages to reinterpret literature on disgust to demonstrate that it can be attributed two unique behaviour profiles that align with and fulfil these postulated evolved functions.

[9] Whilst the Dual Mechanism Theory draws from much of Kelly's account to characterise physical disgust, developments in the disgust literature entail aspects of his characterisation are out of date. Errors will be identified, and updates shall be introduced as and when appropriate.

were once distinguished but became functionally integrated – entangled with each other – in the cognitive architecture of modern human beings" (2011: 45). He identifies these two mechanisms as the *poison* and *parasite* mechanisms.

The poison mechanism evolved "to regulate food intake and protect the gut against ingested substances that are poisonous, toxic, or otherwise harmful" (2011: 46), specifically regulating substances entering the gastrointestinal system via the mouth. Kelly cites Rozin et al.'s (2008) work on "the omnivore's dilemma" (2011: 46) which he believes presented the adaptive problem that motivated the formation of the poison mechanism[10]. This dilemma recognises that because humans are nutritional generalists, we can consume a wide variety of foods for sustenance, not all of which are suitable for ingestion and so we need a means of identifying unsuitable foods. Kelly identifies that one of ways of addressing this problem is through acquired taste aversions developed towards foods that have induced sickness in the past (2011: 46). Aversion of food is enforced by negative reactions such as nausea, retching, vomiting, pulling a disgusted 'gape' face, and attempting to distance oneself from the elicitor (2011: 47).

As acquired taste aversion successfully facilitates the aversions of poisons entities ingested through the mouth, Kelly takes it to be a major component of the poison aversion mechanism. He then connects the poison mechanism to disgust through the way aversion is manifest as a result of acquired taste avoidance (2011: 47): nausea, vomiting, and a desire to distance oneself from the elicitor are commonly identified avoidance strategies associated with disgust. He therefore takes this as evidence to suggest that these features of disgust originate from the poison mechanism.

During his characterisation of the poison mechanism Kelly also explains that the specific nature of acquiring new taste aversions, experiencing a negative reaction to oral incorporation, entails it "requires only a single trial to acquire an aversion to a new type of food … [this] allows for what is sometimes called 'one-shot learning', and it is not uncommon for it to yield false positives." (2011: 46-47). For example, an individual may eat undercooked chicken and perfectly cooked shrimp in an evening and experience a negative

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[10] Despite criticising Rozin et al.'s (2008) account of the evolution of disgust in Section 4 the previous chapter through a refutation of the animal-reminder hypothesis, the omnivore's dilemma constitutes a different motivational factor so is still suitable for incorporation within the theory.

to the chicken. Given the immediate negative reaction produced by ingestion, the individual's taste aversion mechanism only needs a single instance of exposure to identify the chicken they ingested as unsuitable. However, given that the chicken and shrimp were ingested at the same time, their taste aversion may mistakenly identify both as contaminated entities and develop a false positive aversion towards the shrimp.

The parasite mechanism "was shaped by the adaptive problems raised by disease-causing pathogens and the evolutionary arms race underlying the struggle between parasites and their hosts" (2011: 48). It makes "organisms sensitive to signs of parasites in the environment, especially to the proximal cues of parasitic infection in their conspecifics" (2011: 49), cues take the form of smells, irregularities in appearance, and changes in behaviour. It also makes individuals "sensitive to the dynamics of parasite *transmission"* (2011: 50), aware of the possibility that contact, or proximity, with the perceived parasitic threat may be sufficient to contaminate an entity with the parasite. Kelly identifies that the parasite mechanism functions through avoidance, creating physical space between the organism and potential pathogens, so the organism is not exposed to an infectious entity, or to places that are perceived or known to be infectious.

Kelly states that "disgust has nearly all the properties one would expect of a parasite avoidance mechanism" (2011: 50). Physical disgust is often accompanied by a sense of offensiveness, which leads to the individual distancing themself from the disgust elicitor. Humans also have a keen sense of contamination sensitivity – when an elicitor is exposed to another entity, the entity is treated as similarly disgusting. He further emphasises the connection between disgust and the parasite mechanism by identifying that parasitic entities are quintessential disgust elicitors. For instance, signs of disease are universal disgust elicitors and certain animals, like maggots and worms, are commonly identified as elicitors because of their association with parasites (2011: 51).

Kelly then establishes the parasite mechanism also has a proclivity for false positives, and has a 'hair trigger' (2011: 51). He explains that this occurs because the consequences of a false negative — contamination potentially leading to illness and death — far out way the consequence of a false positive reaction — accidental aversion (2011: 50). Evolution of the mechanism therefore favoured a cautionary 'better safe than sorry approach' and the mechanism developed a sensitive elicitation and elicitor acquisition system. This

consequently entails that genuine exposure to a parasitic threat is not necessary to trigger the parasite mechanism, and perceived contact or contamination is enough to elicit a response as the mechanism once again evolved to favour a better safe than sorry approach.

He then argues that the poison and parasite mechanisms entangled to form disgust through descent with modification[11] and presents three factors he believes motivated the entanglement. First, there was antecedent overlap between elicitors (2011: 54), similar elicitors (e.g., food) frequently activated both the poison and parasite mechanism at the same time leading to them being associated with one another. Second, dietary changes caused by cultural evolution led to the amplification of this elicitor overlap (2011:54). Human's consumption of meat increased with developments to hunting and farming, with this came an increase in poison and parasite sensitivity as meat needs to be properly preserved else it presents significant contamination potential. Finally, each mechanism mutually benefited the other (2011: 55). The 'gape face' present in the poison mechanism served as an effective signal of potentially contaminating entities and vomiting served as a mechanism for parasite ejection should oral incorporation have occurred. The aversive distance generating reaction and sensitivity to contamination the parasite mechanism produced also served as effective avoidance strategies for potentially poisonous entities[12].

Identifying poison and parasite aversion as the components of physical disgust entails it can respond to a diverse range of elicitors. Kelly identifies further research that shows physical disgust reacts to organic materials such as faeces, blood, urine, vomit, and sexual fluids; corpses and signs of organic decay; bodily orifices; breaches and violations of the body envelope[13]; marks of disease and signs of parasitic infection; morphological irregularity and phenotypic abnormality; food (especially meat); animals like 'creepy crawlies' and those associated with death and decay; and finally, sex and reproduction (2011: 29-33). However, physical disgust's proclivity for false positives also entails that elicitors do not have to

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[11] An evolutionary principle he explains (2011: 53) in which selection pressure gradually alters a physical or behavioural trait over generations.

[12] It is also worth noting that Kelly establishes that disgust retained the further characteristics attributed to each mechanism throughout entanglement, such as one-shot learning and the possession of a hair trigger, as such features are mutually beneficial between mechanisms, and beneficial for the newly emerged disgust reaction.

[13] For example, open wounds.

actually belong to one of the aforementioned categories, if the individual perceives the elicitor resembles one of these elicitors, or a poisonous or parasitic threat in general, physical disgust can be triggered[14].

5 Social Disgust

The previous discussion of the social origins hypothesis identified that the social component of disgust functioned to enforce social boundaries by maintaining the values and traditions of the in-group and rejecting and stigmatising the out group. This section will now develop and evidence this function using Rottman et al.'s analysis, then, through a comparison to anger and the analysis of recent experimental data, it will argue that this established function is fulfilled through the communication of negative character judgments.

After expounding the discrepancies in the physical origin hypothesis presented in Section 3.1. Rottman et. al. introduce the idea that disgust also evolved "in large part as a mechanism for excluding individuals from ingroups through stigmatisation and ostracism and for preventing contact with individuals who are members of social out-groups" (2018: 42). To support this claim, they cite evidence from Cheon et. al (2016) who show that disgust is triggered by outgroup encroachment on ingroup identity markers (2018: 45). They also acknowledge disgust-based stigmatisation occurs when in-group members engage in counter normative behaviours, citing Ritter and Preston (2011) who provide evidence that disgust is elicited by reminders of outgroup members. In both instances, Rottman et. al. recognise that it is unlikely that such encroachments or reminders relate to poisonous or parasitic infection (2018: 245). They also present further evidence from Inbar et. al. (2009) and Inbar et. al. (2012a) that demonstrates disgust sensitivity correlates with xenophobic attitudes. And Chapman et. al. (2009) and Tybur et. al. (2013) who provide evidence that disgust is triggered by behaviours considered socially or morally deviant, with none of these behaviours indicating parasitic infection[15].

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[14] From here, Kelly's account continues to argue that the disgust mechanism was then co-opted into a social norm regulatory function. However, the Dual Mechanism account recognises the development of the physical mechanism ends here, and then refers to Rottman et. al. for an account of the development of the social mechanism.

[15] Rottman et. al. presents further evidence that illustrates a connection between disgust and social norm enforcement, a full account of which can be found: (2018:44-47). However, sufficient evidence has currently been presented to demonstrate disgust fulfils the proposed social function.

As this provides sufficient evidence for non-disease related social communications of disgust. Rottman et. al. take this as adequate evidence that disgust evolved a second function, enforcing nonphysical social boundaries in an attempt to preserve the values and behaviours of the in-group by negatively reacting to and stigmatising the out-group.

5.1 Challenges to the Existence of Social Disgust

Whilst Rottman et. al. identify evidence that disgust serves this second function, they do not elaborate on how this is achieved. This vagueness reflects a problem that has been identified in the broader disgust literature, a lack of clarity on the function of disgust in the social realm[16], and A consequence of this has been doubts about the existence of a social function of disgust.

Nabi (2002) argued appraisal-based disgust research is faulty as it relies on the public's ability to accurately express their emotional experience, an issue which she identifies is further complicated by the problem of definitional continuity between academic and public communities. She conducted an experiment in which she asked participants to describe times when they felt either angry, disgust, disgusted, revulsion, or grossed out (2002: 695). Results found participants frequently expressed disgust towards violations with the same conceptual content as anger, leading her to claim expressions of social disgust are just used as a synonym for anger (2002: 702).

Nabi's claims were supported by Gutierrez, Giner-Sorolla, and Vasiljevik (2012) who found that disgust reactions in non-physical moral violations occurred concurrently with anger reactions, they took this as evidence that in these contexts disgust was utilised as a metaphor for anger (2012: 60). Russell and Giner-Sorolla (2011a) conducted a similar experiment and found when they controlled for anger elicitation the use of the word disgust and its synonyms as a reaction to this violation greatly reduced.

Russell and Giner-Sorolla's run of experiments (2010, 2011a, 2011b, and 2013) into the difference between disgust and anger *could* also be interpreted to provide further support for this claim that social disgust is just used as a synonym for anger. They demonstrate that

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[16] Rottman et. al. do acknowledge this in their discussion of the relationship between disgust and morality (2018: 45). However, their discussion is limited to speculative remarks on the matter (2018: 45-47)

disgust expressed towards social violations shares the same behaviour as anger, being event and agent focused rather than object focused, and sharing the same cognitive characteristics (2013: 340). So, not only is disgust seemingly used as a synonym for anger, but such expressions also directly resemble anger, which could be interpreted to suggest there are no independent features of social disgust[17].

5.2 The Difference Between Anger and Social Disgust

Evidence for the difference between social disgust and anger can be observed through social-functionalist analysis. Hutcherson and Gross (2011) explain that the social-functionalist perspective examines emotions as "adaptive solutions comprising a coordinated set of appraisals, communicative gestures, physiological responses, and action tendencies tailored to respond to crucial problems faced by our species over the millennia" (2011: 720). Emotions are characterised by the behavioural features they developed to fulfil their evolved function. This method of analysing emotion seems apt considering the way in which the Dual Mechanism Theory has chosen to develop a theory of disgust, determining its actions and behaviour from its evolved function.

Hutcherson and Gross provide initial experimental evidence for social-functionalist differences between social disgust and anger. Their first three experiments found anger was triggered when the individual perceived a threat of harm to the self, whereas social disgust was triggered when the individual perceived a threat of harm to others and was also concerned with the "intentions or maliciousness of the perpetrator" (2011: 726). Their fourth and fifth studies demonstrated that each emotion produced different consequent judgements and actions. They identified social disgust judgements as more damaging "both because it seems hardest to undo and is most indicative of a person's inherent moral character" (2011: 720). Whereas anger "is the most easily remedied, is more concerned

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[17] A further cause of the conflation of social disgust and anger may have been the influence of moral foundation theory formulated during this period of social disgust scepticism. Shweder et. al. (1997) and Rozin et. al. (1999) argued specific types of moral violations elicited specific moral emotions, with harm violations leading to anger, and purity violations causing disgust. As this led to the perception that disgust occurred *only* in response to purity violations, any instance in which it was reported outside its domain (such as activating toward harm violations) were perceived as false reports and anger synonyms. However, later analysis from Cameron, Lindquist, and Gray (2015) disconnected emotions from moral foundation theory.

with specific *actions*, and is most likely to arise from a misunderstanding or individually held attitude" (2011: 730). Anger was also associated with "active attempts to stop an offensive behaviour" and was responsive to apologies. Whereas social disgust judged attempted apologies and reconciliatory behaviour insufficient to make up for the transgression and produced character judgements that identified others as immoral people (2011: 732).[18]

After Hutcherson and Gross's initial analysis, further experimentation can be identified to corroborate their claims, and draw out additional social-functionalist differences. Giner-Sorolla and Chapman's (2017) first study examined emotional reactions towards acts that had previously been determined to express either bad actions or a bad moral character[19] results supported the hypothesis that "disgust is related to judgments of bad moral character, and … anger is related to judgments about the act itself" (2017: 83). Recognising that the acts in this scenario could both be perceived to express both bad action and bad character, they conducted a further study that separated act from character by describing a transgression then presenting varying information about the transgressors moral character (i.e., whether they had desire to harm). Results found that negatively manipulating character information led to an increase in social disgust judgements (2017: 85), further corroborating the claim that social disgust responds to displays of bad character.

Molho et. al. (2017) continued Hutcherson and Gross' analysis of the self/other direction of concern in anger and social disgust, and further examined the confrontational tendencies of each emotion. Their first experiment corroborated Hutcherson and Gross' findings (2011: 726) that anger was reported towards violations against the self and social disgust was reported towards violations against others (2017: 612). Their second experiment asked individuals to endorse either a direct or indirect aggressive response towards a violation that triggered either anger or social disgust. Results showed: "Anger related positively to higher-cost, physically or verbally aggressive sentiments (direct aggression) … disgust

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[18] Hutcherson and Gross's experiments can be seen to specifically measure social disgust as they omitted scenarios from experiments "deemed to be less clearly moral in nature and ambiguous with respect to moral intention", all of which can also be understood to be scenarios containing physical disgust elicitors (2011: 724).

[19] Giner-Sorolla and Chapman used the same scenarios as Tannenbaum et. al. (2011) whose experiment determined that the moral evaluation of content of this scenario can vary, with one instance in the scenario being evaluated as expressing a bad moral action and the other instance expressing bad moral character.

related positively to sentiments in favour of lower-cost social exclusion and reputational attacks (indirect aggression)" (2017: 614). Their final experiment identified that direct aggression was utilised in instances of transgression against the self, aligning with anger's self-oriented direction of concern and indirect aggression was utilised in instances of transgressions against others (2017: 617), aligning with social disgust's other-oriented direction of concern. By showing that different aggressive sentiments align with different emotional reactions and these same aggressive sentiments align with the same target of violation its corresponding emotion reacts to, Molho et. al. have provided sufficient evidence to assume that the emotional reaction and aggressive sentiment are causally linked by the target of the violation.

Kupfer and Giner-Sorolla (2017) identified that social disgust and anger also serve different communication functions. Their first two experiments demonstrated that people infer expressions of social disgust to communicate moral concerns, whereas expressions of anger are inferred to communicate self-interested concerns (2017: 634). They further identified that individuals in fact use disgust to communicate moral concerns, whereas people use anger to communicate harm to one's self-interest (2017: 636). Their final experiment tested the strength of this communication hypothesis against Hutcherson and Gross and Molho et al.'s determinations about the self/other direction of concern expressed by anger and social disgust. Whether the desire to communicate moral concerns about a transgression made against the self through disgust overrides the expression of anger that would usually be expressed towards the transgression made against the self. Results showed that expressions of disgust increased when the individual intended to communicate moral concerns, despite the scenario inducing feelings of anger (2017: 638). These results do not invalidate Hutcherson and Gross' findings, instead they illustrate that the self/other expression boundary can be overridden in certain situations.

Finally, Giner-Sorolla and Espinosa (2011) conducted a different study into the nature of disgust communication, finding that expressions of anger cued guilt in the transgressor whereas expressions of disgust cued shame (2011: 52). An ambiguity is present in this study as disgust was communicated to participants through facial expressions (2011: 50) and it was not clear whether this was expressing social or physical disgust. However, Cannon et. al. (2011) and Chapman et. al. (2009) observed the use of the disgust face in instances that

have socially but not physically disgusting content, indicating the disgusted expressions can also respond to social transgressions. As Giner-Sorolla and Espinosa determined the disgusted facial expression cues shame and the facial expression communicates both social and physical transgressions, then shame can be cued by both social and physical disgust.

Overall, sufficient social-functionalist evidence has been presented that demonstrates clear differences between the two emotions and vindicates social disgust's existence as independent from anger. Analysis found anger reacts to the negative content and consequences of acts and is self-oriented, with the expression of anger being both interpreted and utilised as a self-interested expression. This led Kupfer and Giner-Sorolla to suggest that expressions of anger are less morally principled than expressions of disgust, as they are chiefly concerned with the preservation of the self (2017: 632). It is further characterised as being easily activated but easily overcome with sufficient reason. It also recognised to produce directly aggressive behaviour to confront its elicitor, which cues guilt within the transgressor.

On the other hand, evidence characterises social disgust as an other-oriented emotion that responds to displays of bad character. The expression of social disgust is both interpreted and utilised as an expression of moral concern and when an individual intends to express moral concern through disgust this can override expressions of self-concern. Once disgust judgements are formed, they remain responsive to reasons for mitigation, but are harder to undo. Finally, social disgust produces indirect aggressive behaviour, such as coercion, social exclusion, and reputation attacks, to resolve transgression (Molho et al. 2017). These indirect aggressive strategies are supported by the cuing of shame within transgressors.

5.3 The Function of Social Disgust

This sociofunctionalist analysis identifies important features of social disgust that help to determine how it fulfils its attributed evolved function. All the identified features of the emotion contribute to its capacity to communicate both moral and non-moral negative character evaluations. Both Hutcherson and Gross (2011) and Giner-Sorolla and Chapman (2017) have already suggested this function and their evidence provides strong support for this claim, showing that the amount of social disgust experienced directly correlates with the level of bad character the individual displays (2017: 85). Kupfer and Giner-Sorolla's

(2017) determination that expressions of social disgust are both interpreted and utilised as expressions of moral concern does not specify the nature of moral concern, but given Giner-Sorolla and Chapman's evidence, it is reasonable that such moral concern may relate to the moral status of an individual's character.

Giner-Sorolla and Gutierrez's (2011) determination that disgust cues shame again connects it to negative character judgements as Lewis (2010) identified an individual's negative appraisals of their own character are linked with shame, suggesting disgust functions to prompt the individual to re-evaluate their own character. Here, social disgust's communication of negative character judgements can be seen to fulfil the social regulatory function Rottman et al. describe through the motivational pressure shame applies to change behaviour to adhere to the expressed group value.

Molho et. al.'s (2017) identification that social disgust was associated with indirect coercive resolution strategies such as social exclusion and reputation attacks again demonstrates how the communication of disgust fulfils its evolved function. These strategies do not outright punish the individual, which may lead to conflict and potential alienation, they instead manipulate them through indirect social pressure to change their character to adhere to social standards. Molho et al.'s identification that resolution strategies involve reputation attacks again links the communication of disgust with the communication of character dissatisfaction, as such attacks often involve criticism of another's character. Finally, overriding the communication of personal distress to communicate the moral status of an individual's character display (Kupfer and Giner-Sorolla 2017) also displays the group-oriented nature of the emotion, as social disgust can override self-interested motivations.

The existence of character oriented social disgust is also supported by Giner-Sorolla et al. in their formulation of the Integrative Function Theory (2018). They develop the connection between disgust and character judgements by first identifying a connection to character judgements in disgust purity judgments (Chakroff et al. 2017 and Russell and Piazza 2015), and recognising this connection is present in both real and fictitious judgements (Sabo and Giner-Sorolla 2017). They then also discuss Giner-Sorolla and Chapman's (2017) experiments as direct evidence for the character-judgement hypothesis and conclude that this advances the position that disgust responds to signs of bad character. Despite the fact the IFT presents a different understanding of the emotion which will be elaborated on in the

following chapter, acknowledgement and validation of the character judgement mechanism from a different theory that establishes its existence through analysis of a different set of evidence adds credibility to the existence of the character communication function of social disgust.

Overall, sufficient evidence has been presented to show that social disgust preserves the values and behaviours of the in-group by rejecting and stigmatising the out-group through the communication of negative character judgements.

5.4 Further Considerations and Implications of Social Disgust

Before concluding it is worth identifying some important implications of this characterisation of the social function of disgust and the determination that this is fulfilled by the communication of negative character judgements.

First, identifying that negative character judgements fulfil social disgust's evolved function facilitates the accurate determination of social disgust eliciting criteria. Any act (Tannenbaum et al. 2011, Giner-Sorolla and Chapman 2017), appearance (Kupfer and Giner-Sorolla 2021), and by extension expression of belief[20] that indicates they possess character traits the agent disapproves of is sufficient to elicit social disgust within the agent as these can be interpreted as signals of transgression of group values.

The identification that social disgust is triggered by displays of character the agent perceives as negative also goes some way in explaining social disgust's conflation with anger. Violations that elicit anger, for example violence, cheating, and stealing reliably demonstrate the transgressor also possesses a character the agent would disapprove of. Similarly, displays of bad character may often be a violation that elicits anger[21]. Therefore, the two emotions often coactivate and an unawareness of the factors that lead to one

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[20] As acts and appearance can also be seen as communicating belief systems, e.g., when an individual wears religious marking.

[21] Further conflation may occur as a result of the moral communication function of disgust, disgust may be expressed toward a violation that is usually understood to elicit anger if the individual intends to communicate a moral judgement.

emotion being expressed over the other, lead to disgust being misconstrued as a synonym for anger[22].

It is also worth noting that this concern for character can go beyond the moral domain and applies to conventional social disgust reactions, in that social disgust can express concern that someone's character does not adhere to the same conventions as they do. For example, a middle-class banker who lives in London may react with social disgust towards a vagrant hippy, their social disgust is triggered as a reaction to a character that adheres to radically different conventions. Further examples may include social disgust toward people with bodily modifications, towards people that consume different types of food, and social disgust toward people who engage in different hygiene practises[23].

This identification that social disgust also responds to conventional violations supports the Dual Mechanism Theory labelling social disgust as such, and not as some alternative like character or moral disgust. As discussion identified the mechanism responds to both conventional *and* moral violations, labelling it moral disgust would constitute a mischaracterisation. Character disgust may be considered a more accurate characterisation, as the mechanism responds to signs of character the individual disapproves of. However, this fails to recognise this is done in fulfilment of a broader social function and, as Molho et al. (2017) and Kupfer and Giner-Sorolla have demonstrated, social disgust often behaves in a way to benefit the group, not specifically the individual. Therefore, social disgust appears to be the most apt description.

Finally, the character communication function of social disgust has significant implications for the broader focus of the thesis. One of the central features of Virtue Ethics is the assessment of morality through judgement of an individual's character traits. The established function of social disgust implies it has a significant place in judgements of moral character as it is responsible for the interpretation and communication of the possession of

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[22] Discussion in Section 5.1 of this chapter also identifies that social disgust shares similar cognitive characteristics as anger, being responsive to reasons, context, and intentional, which again contributes to the perceived similarity.

[23] Whilst these further examples contain physical disgust elicitors that may influence the formations of these judgements, it is still possible to recognise these physical disgust reactions may also come with negative social judgements. For example, people with tattoos and piercings are often rejected by the older generation.

vicious character traits[24]. Consequently, if any substantive compatibility problems are identified between social disgust and Naturalistic Virtue Theories, not only will they demonstrate that Naturalistic Theories are flawed and inoperable. They also show Naturalistic Theories' conception of a naturally virtuous character is flawed as it is established against a flawed understanding of what constitutes naturally vicious behaviour.

6 Conclusion

Overall, this chapter has presented the first half of the Dual Mechanism Theory of disgust, determining the evolutionary origin of disgust and the evolved function of each disgust mechanism. It began by establishing that Rottman et al.'s social origins hypothesis, that disgust emerged from both physical contamination-based pressure and social regulatory pressure, provided the most compelling account of the evolutionary origin of disgust. It then showed that the physical disgust mechanism functions to facilitate poison and parasite avoidance, and through a sociofunctionalist comparison with anger, it also showed that social disgust functions to regulate the values and behaviours of the in-group through rejection and stigmatisation of out-group members using negative character judgements.

Despite being able to consider both mechanisms disgust, this chapter has begun to demonstrate why the Dual Mechanism Theory argues each reaction is an independent mechanism. They each come from a different evolutionary origin, and they each serve a very different purpose. This will be elaborated on and made more apparent in the following chapter, which will outline the behavioural profile, cognitive characterisation, and process of elicitor formation for each mechanism.

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[24] It is interesting to note here that this established function also appears to validate the understanding of the moral function of disgust established in Section 4 of the previous chapter — providing an aesthetic moral reaction towards displays of vice. This established account of moral disgust could therefore be understood as a negative reaction to actions that display character traits the individual morally disapproves of, just as a moral social disgust reaction would do.

Chapter Three - Behavioural Profile and Elicitor Acquisition of Each Disgust System

1 Introduction

This chapter will now establish the behavioural characteristics of each disgust mechanism and explore how elicitors are formed for each one. It shall begin by utilising Kelly's (2011) account to establish the basic behaviour of physical disgust and will then progress to examine physical disgust's capacity to affect subsequent judgments. Introducing Piazza et al., the chapter then demonstrates that Kelly provides an outdated understanding of physical disgust's effect on subsequent judgments and refers to Giner-Sorolla et al.'s Integrative Functional Theory (IFT) to provide a more accurate account. This establishes that physical disgust can negatively affect judgements - making them harsher and more severe - only when its elicitor occurs as the object of evaluation.

The characterisation of the behaviour of the physical disgust mechanism will then proceed to identify the cognitive characteristics of the reflex. This shall be done through further utilisation of the IFT, demonstrating how the IFT can be reinterpreted by the Dual Mechanism paradigm and how one of its constituent parts, the associative function, can be used to characterise the cognitive behaviour of the physical disgust mechanism.

A characterisation of the behaviour of the social disgust mechanism will then be presented which recognises that, as an emerging feature of disgust, less literature is available to provide a vivid account. However, a sufficient characterisation can still be presented by utilising a variety of sources such as previous work that compares disgust to anger, a further reinterpretation of the IFT that shows that the IFT's appraisal function can in fact characterises the cognitive behaviour of social disgust, and further studies that supply evidence.

Once the characterisation of each disgust mechanism is complete the chapter will proceed to explore how disgust is elicited, and how elicitors are formed. Two different accounts of disgust elicitation will be presented - Kelly's social norm-based account, and Hanna and Sinnott-Armstrong's meaning threat account - and their suitability as an account of disgust elicitation shall be examined. The chapter will argue that an integration of both these accounts provides the best picture of disgust elicitation and elicitor acquisition, but this

exploration will conclude by recognising that this integrated account still might not be suitable as an account of physical disgust elicitation and elicitor acquisition.

The chapter will then discuss why, given apparent differences between physical and social disgust, both mechanisms can be considered disgust reactions. This will recognise that both mechanisms fulfil the same overall function, aversion of potentially contaminating entities, and that this similarity in function is expressed through the fact that each mechanism mutually benefits the other in instances of coactivation.

In light of the characterisation of disgust presented throughout the past two chapters, the chapter will conclude by explaining that social disgust can be classified as an emotion, but physical disgust is better understood as a reflex.

2 Physical Disgust Behavioural Profile

2.1 Affect Programme, Core Disgust, and Downstream Effects

The basic behavioural characteristics of physical disgust can be presented using Kelly's (2011) account. His characterisation of its central components is mostly accurate, however, his account of physical disgust's effects on subsequent judgements has since been disproved by developments in the literature. Discussion in this section will therefore focus on the fundamental behaviours of the reflex, and the following sections will address the inaccuracy of Kelly' claims regarding physical disgust's interactions with other judgments, providing an updated account. As it is the thesis' intention to examine disgust's effect on the individual's capacity for virtue, for the sake of brevity, some characteristics of disgust Kelly identifies that are clearly not relevant to this project shall be omitted or only mentioned briefly.

Kelly divides his characterisation of the behaviour of physical disgust into three parts; the affect program; core disgust; and the downstream effects. He establishes that the affect program refers to the reflex-like response of the mechanism that automatically reacts to specific elicitors in a specific fashion (2011: 15). This is expressed in physical disgust as an attempt to distance oneself from the disgusting entity - recoiling the head, physically moving away from the elicitor, and throwing away or destroying the disgusting entity when it is appropriate to do so. The individual may also pull a disgusted 'gape' face which simulates the facial expression that accompanies retching or vomiting and is universally

utilised as an expression of the reflex (2011: 16). Finally, the individual often experiences revulsion and repulsion when experiencing physical disgust, often accompanied by nausea or the need to purge (2011: 16).

Core disgust[1] refers to a cluster of features which "are slightly less reflexive and more cognitive in character" (2011: 17) and consists of a sense of oral incorporation, a sense of offensiveness, and contamination sensitivity. Kelly explains that oral incorporation most closely relates to the affect program and describes the pronounced oral reaction the individual has to physical disgust elicitors, with effects including nausea, retching, and salivation. Kelly identifies that gustatory reactions always occur at some level in physical disgust reactions (2011: 17) - even toward those elicitors that are not potential foods or mouth related - a point that is evidenced by research from Rozin et. al. (1995) who identified that when physical disgust elicitors are considered as food or in the vicinity of the mouth, aversion toward these elicitors is greatly increased.

Kelly then describes that physical disgust elicitors also engender a sense of offensiveness in individuals, stating: "The very presence and proximity of disgusting entities are upsetting; they tend to capture attention, and are both memorable and difficult to ignore; they are perceived as unclean, somehow dirty, tainted, or impure" (2011: 18). Strong physical disgust has a lasting effect on the individual's cognition, and they often experience a desire to distance themselves from the elicitor and to cleanse or purify themself after interaction with an elicitor.

The final component of core disgust is contamination sensitivity. Citing Nemeroff and Rozin 2000; Siegal 1988; and Siegal and Share 1990 in evidence, Kelly remarks that once an entity has been identified as disgusting, it is recognised as having the potential to contaminate other entities with its offensive disgusting content (2019: 19). He explains that contamination commonly occurs through physical contact, but proximity and merely perceived contact are enough to trigger contamination sensitivity. There also does not need to be physical residue for the agent to perceive something as contaminated, and a known history of prior contact or proximity can also lead to perceived contamination. Once

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[1] A term coined by Rozin et. al. (2008) but now utilised by Kelly.

contamination occurs, the contaminated item treated in kind with the source entity, which entails it too can contaminate other objects (2019: 19).[2]

Kelly's characterisation of physical disgust concludes with an elaboration of its downstream effects, these represent "the way that a capacity's operation typically affects other, distinct activities and capacities – cognitive, behavioural, or otherwise" (2011: 22). The first downstream effect Kelly identifies is that disgust can cause "attention and memory biases for disgust elicitors" (2011: 23). To evidence this he cites Charash and McKay's (2002) experiments which discovered people pay more attention to instances in which they experience disgust, and they are more likely to remember such occasions.

Kelly then claims that attention and memory biases are probably connected to a further downstream effect — a bias toward information sharing (2011: 23). Individuals are likely to report physical disgust after they experience it, he cites Heath et. al. (2001) (2011: 23) who told participants of a study urban legends, some were embellished with disgust triggering facts. They found that those urban legends involving disgust were more likely to be passed along, and the more disgusting the story was correlated with the likelihood of it being spread.

Finally, Kelly also claims that Charash and McKay's studies also revealed a further downstream effect of disgust in that they demonstrate evidence for mood congruency within disgust; "being in a particular mood or emotional state makes one more sensitive to elicitors of that emotion" (2011: 23). Charash and McKay's experiments demonstrated that when an individual is primed with disgusting stories, they were better at recalling disgusting things, more susceptible to disgust, and paid more attention to disgusting things in general.

2.2 Physical Disgust's Effects on Subsequent Judgements

A further downstream effect Kelly attributes to physical disgust, and is often attributed to disgust by other scholars, is its capacity to negatively affect subsequent judgements. Kelly

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[2] Kelly claims contamination sensitivity is elicitor neutral; this implies that on his account instances of social disgust have contamination potential as well (2011: 19). However, this constitutes an instance of inaccurate characterisation that resulted from his claim that physical disgust was co-opted to serve a social function. Future discussion of the cognitive characteristics of social disgust will demonstrate it is reason responsive and context sensitive, meaning it can discern the source of the offence without condemning any other individuals by virtue of proximity.

cites evidence that demonstrates that physical disgust can make judgements harsher and more severe when its elicitor occurs as the object of the individual's evaluation, and when it occurs extraneously alongside a judgement (2011: 24). Identifying a physical disgust elicitor as the 'object of individual's evaluation' refers to when an elicitor enters cognition as part of the judgement the individual is making, for example, there may be some disgust inducing injury detail when an individual is morally judging a violent assault. Whereas identifying an elicitor as extraneous to a judgement refers to when it occurs coincidentally alongside a judgement and has nothing to do with it. For example, an individual may be exposed to a bad smell, or be surrounded by a disgusting environment during a time in which they were making a moral judgement. Citing Jones and Fitness (2008), Kelly also claims that the possession of a high sensitivity to physical disgust has the capacity to increase aversion to people who adhere to different values and behaviours (2011: 24).

Developments in the literature have since demonstrated that disgust does not cause two of these downstream effects on judgement. First, Piazza et al. (2018) have refuted the claim that individual disgust sensitivity affects judgement severity, as "recent work suggests that this relationship between disgust sensitivity and condemnation is part of a much more general phenomena" (2018: 70). They cite Landy and Piazza (2017) who provide evidence that individuals with high disgust sensitivity tend to be more negative in a wide array of judgements, including judgements of intelligence and aesthetic judgements[3]. Piazza et. al. continue, explaining that Landy and Piazza also demonstrates that "trait level disgust is not the only emotion that is linked to harsher moral judgements" (2018: 70) and anxiety and anger can also increase the severity of moral judgements. They therefore argue that a higher level of trait disgust is a constituent of a broader psychological attitude which increases the individual's aversion to norm violating behaviour. It does not operate on its own, and therefore it cannot be interpreted as a unique factor that affects moral judgements.

Regarding physical disgust's capacity to affect judgements when it occurs extraneously outside of the individual's cognition, Piazza et. al. (2018) also present meta-analysis from Landy and Goodwin (2015) that "found evidence for a very small effect of incidental disgust

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[3] Here, Landy and Piazza can be seen to be measuring physical disgust, as they utilise the pathogen subscale of the Tybur et al.'s (2009) Three-Domain Disgust Scale (2017: 9).

on condemnation … which vanishes entirely when statistically accounting for publication bias" (2018: 69). A high-powered replication study was subsequently conducted by Johnson et. al. (2016) "also found no effect of induced disgust on moral judgements" (2018: 69). Therefore, further experimentation revealed that extraneous physical disgust has no effect on other judgements.

It is worth briefly noting here that Piazza et al. also argue and present evidence against claims that physical disgust is a moralising emotion (2018: 71). By 'moralising emotion', they mean physical disgust influencing a judgement to the degree that individuals now perceive it to have moral content. Whilst Kelly does not explicitly identify this downstream effect, other scholars have suggested as such[4], and it represents a potentially significant downstream effect. Piazza et al. argue that presented examples of moral violations that appear to occur as a result of the physical disgust component, such as spitting at the dinner table or consensual incest, reflect instances which contain other moral violations which happen to involve a physical disgust elicitor (2018: 71). For example, they cite Royzman et al. (2009) who found "that moralisation of spitting during dinner is much more strongly predicted by perceptions of harm or offence caused … than by felt [physical] disgust" (2018: 71).

Returning to the discussion of physical disgust's effect on subsequent judgments, its capacity to make judgments harsher and more severe when it occurs as the object of evaluation is yet to be addressed. Piazza et al. did not mention it in their analysis, so it remains a possible point of interference, and evidence presented by Giner-Sorolla et al. in their formulation of the Integrative Function Theory (IFT) of disgust established that it does in fact have a negative effect. Giner-Sorolla et al.'s IFT takes a different approach to disgust theory construction and formulates a significantly different account of disgust to the Dual Mechanism Theory[5]. However, they too discuss the effect of disgust on subsequent judgements and this discussion can be read to be examining the effect of physical disgust on judgements, so their analysis can be used as evidence.

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[4] Inbar et al. (2009a) suggested disgust towards homosexual behaviour may be a motivating force for anti-gay moral attitudes, Rozin et al (1997) suggest disgust towards meat eating may motivate moral vegetarianism, and Borg et al. (2008) suggest disgust towards incest motivates its moral disapproval.
[5] Some of these differences will be discussed in the following section.

Similarly to Piazza et al., Giner-Sorolla et al. accept Landy and Goodwin's (2015) meta-analysis that extraneous disgust outside the individual's cognition cannot negatively affect an individual's judgments (2018: 261), and remain sceptical about disgust's capacity to moralise judgements (2018: 263). They do however recognise that "Disgust may be more influential when incidental, morally irrelevant disgust cues are associated with the target of moral consideration, instead of floating free in the air" (2018: 263).

To evidence this effect, they cite studies into homosexuality and obesity stigma which demonstrated disgust increased the negative evaluation of such groups (2018: 263)[6], Salerno's (2017) experiments which found a mock jury's judgements increased in negativity depending on the level of physical disgust induced by an injury detailing disgust elicitor presented as the object of evaluation[7], and studies showing that victims of sexual offences are often perceived in negative light and propose disgust as a potential cause for this (2018: 264). From the Dual Mechanism Theory's perspective, all these factors that affect judgements by occurring as the object of evaluation Giner-Sorolla et al. have identified are physical disgust elicitors[8]. Therefore, when occurring as the object of evaluation, evidence demonstrates that physical disgust elicitors do have the harshening effects on judgments as Kelly proposes.

2.3 Physical Disgust's Cognitive Characteristics

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[6] Further stigmatisation studies that show physical disgust elicitors occurring as the object of evaluation leading to negative judgements which are not identified by Giner-Sorolla et al. (2018) are presented by Park et al. (2003) who cite studies demonstrating attitudinal and behavioural differences displayed towards disabled people. They determined physical disabilities sometimes resemble signs of disease and the physical disgust mechanism sometimes mistakenly activates towards such cues. Smith et al. (2007) identifies "disgust sensitivity was a significant, positive predictor of wanting less contact with colostomy patients" (2007: 787), with colostomy bags connection to bodily waste making them a clear physical disgust elicitor. And Faulkner et al. (2004) identified physical disgust motivated negative reactions towards foreign peoples, with phenotypic differences also being a potential physical disgust elicitor.

[7] Salerno also strengthens the case for physical disgust negatively affecting judgements when its elicitor occurs as the object of evaluation by identifying eight further studies that determine the presence of gruesome physically disgusting photographs as trial evidence increased pro-prosecution or pro-plaintiff judgements through disgust's negative effect on judgement (2017: 337).

[8] For example, obesity can be considered a sign of morphological irregularity and a disgust elicitor, and injury detail can contain blood and gore which are also physical disgust elicitors.

Little evidence currently exists presenting an independent characterisation of the cognitive features of physical disgust as much of the psychological examination of disgust has been focused elsewhere. However, analysis of the characterisation of disgust presented in the IFT can draw out the cognitive characteristics of physical disgust. To do so, it will first be necessary to break down the relevant parts of the IFT.

As stated in the previous section, the IFT takes a different approach to disgust theory creation to the Dual Mechanism Theory. Working within the integrative functional theory paradigm created by Giner-Sorolla (2012), the IFT formulates disgust as a singular emotion but rejects the notion that it can be characterised by a single function (2018: 226). Instead, it proposes that disgust possesses four distinct functions: appraisal, association, self-regulation, and communication. It recognises that these functions can stack and occur together and attempts to explain the behaviour of disgust through the coexistence of each function and any conflict that might arise between them (2018: 226). The following discussion will focus on associations and appraisals as these represent the two modes of disgust cognition within the IFT (2018: 226) and demonstrate how the IFT's understanding of these can be reinterpreted within the dual mechanism paradigm.

Appraisals are "contextually sensitive assessments of the environment that motivate appropriate behaviour and thought" (2018: 226). They start with an assessment of relevant situational information as disgusting, then produce the emotional experience of disgust. Seeing a dead pigeon on the street, the individual would identify features of the situation that determine it to be a potential source of contamination, which would reasonably elicit disgust (2018: 226). By contrast, associations are simple connections between the stimulus and the emotion that are relatively insensitive to context, an individual may witness a plastic dog poo, rapidly associate it with a potential source of contamination, and so experience a false positive disgust reaction (2018: 226). The IFT identifies that both associations and appraisal can be made in response to all possible disgust elicitors including signs of

contamination (2018: 234), 'core' disgust elicitors[9], bodily moral violations[10] (2018: 235), and displays of character traits the individual disapproves of (2018: 255).

Giner-Sorolla et al. claim that compared to appraisals, associations are characteristically "more automatic, more superficial in their processing of the stimulus, less accessible to reasoned processing, and less flexible in their application" (2018: 265)[11]. They argue that the experimental evidence for the cognitive characteristics of most instances of moral disgust aligns with this characterisation of appraisals, demonstrating an intuitively triggered, contextually insensitive, and not cognitively demanding reaction (2018: 265). This similarity in cognitive characteristics leads Giner-Sorolla et al. to claim that such instances of moral disgust are associative judgements (2018: 265) and moral disgust reactions *tend* to occur in an associative manner (2018: 269).

They proceed to cite a series of experiments from Russell and Giner-Sorolla that elaborate on the cognitive characteristics of associative disgust, beginning with evidence that shows bodily and sociomoral disgust judgements tend to be unresponsive to intentionality (2011a) and unresponsive to mitigating factors (2011c). They cite further experiments that they claim show the experience of bodily moral disgust made the individual unable to provide cognitively accessible reasons for their response (2011b). And they also identified experiments from Gutierrez and Giner-Sorolla (*unpublished manuscript*) that determined bodily moral disgust also influenced an individual's judgments whilst they were under cognitive load (2018: 267).

Analysing the experiments Giner-Sorolla et al. use to establish the cognitive characteristics of associative disgust reveals every one contains a physical disgust elicitor as the object of evaluation. Russell and Giner-Sorolla's (2011a) intentionality-unresponsiveness experiment

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[9] Understood by the IFT as objects perceived to be bad tasting or physically harmful when considered entering their mouth (Rozin and Fallon 1987)

[10] Bodily moral violations are a class of violations presented by Russell and Giner-Sorolla (2013) that the IFT endorse and elaborate in which "a person does something that directly violates a moralised rule about how the body is used" (2018: 235). This may regulate sexual behaviour, food consumption and hygiene norms, bodily modification and grooming, and the extent to which one can damage one's own body (for example through suicide).

[11] The cognitive characteristics of appraisals are not explicitly stated, but it can be assumed that they possess opposing characteristics - more cognitively accessible reasoned responses, which can respond flexibly to contextual information.

used vignettes describing the consumption of a human steak, their (2011c) reason-unresponsiveness experiment used vignettes describing the consuming a dead dog and a sexual relationship between adults with a large age difference, and their (2011b) cognitive accessibility experiment involved judgements of paedophiles, and the violation of sexual norms. Giner-Sorolla et al. also cite Björklund et al.'s (2000) experiments that contain hypothetical scenarios of consensual incest to provide further evidence for the reason unresponsiveness of moral disgust, and the only time disgust influenced judgments under cognitive load was whilst the individual was responding to bodily moral violations containing inappropriate sexual acts, unusual foods, and contact with the dead (Gutierrez and Giner-Sorolla *unpublish manuscript*) (2018: 268).

As the previous section determined that physical disgust had a discernible effect on judgement when it occurred as the object of evaluation, and Giner-Sorolla et al.'s characterisation of associative disgust only uses instances in which physical disgust occurs as the object of evaluation. It can be argued that the cognitive characteristics Giner-Sorolla et al. identify and attribute to appraised reaction in fact express the cognitive characteristics of physical disgust.

Two points can be made to strengthen this claim. First, despite identifying that moral disgust reactions tend to be associative in nature, Giner-Sorolla et al. identify some experiments that demonstrate moral disgust judgements can possess reasoned characteristics and resemble appraised reactions (2018: 269). These experiments will be discussed in more detail in the following section, but those presented in evidence (Russell and Giner-Sorolla 2011b and Gutierrez and Giner-Sorolla 2007) can both be determined to not possess a physical disgust elicitor as the object of evaluation and instead elicit social disgust[12]. As the reaction possesses different cognitive characteristics in the absence of a physical disgust elicitor occurring as the object of evaluation, this indicates it is the presence of a physical disgust elicitor that produces 'associative' characteristics.

Second, analysing judgements affected by physical disgust reveals physical disgust behavioural characteristics. Returning to Salerno's experiments, the act produced by

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[12] For example, the experiment cited from Russell and Giner-Sorolla (2011b) involves measuring individual reactions to activist feminists, Islamic religious fundamentalists, and crooked politicians.

physical disgust interfering with judgements, convicting the defendant (2017: 341), resembles the aversive behaviour characteristic of physical disgust. The individual creates distance from the elicitor by convicting the defendant and isolating them in prison. This is also demonstrated by Park et al. (2003) who cite evidence showing individuals tend to be less relaxed and less comfortable around disabled people[13] (2003: 70) and further studies that show people tend towards physical avoidance behaviours when engaging with physically disabled people (2003: 71), again demonstrating aversive behaviours characteristic of physical disgust during the judgement.

Further analysis of Salerno's experiments also demonstrates that the intensity of the experienced physical disgust reaction towards gory evidence is reflected in the cognitive characteristics of the individual's judgements. Her experiments presented participants with varying bodily sensitivities either colour or black and white photographs of gory images related to a crime they were participating in a mock jury for. Both bodily sensitivity and colour photography are evidenced to influence the severity of individual physical disgust reactions, with colour photographs of physically disgusting images elicit more intense disgust reactions than black and white photographs (Moran 2021) and individuals with higher bodily sensitivity experience more intense physical disgust reactions (Salerno 2017).

Results found the criteria that facilitated the elicitation of the strongest possible physical disgust reaction, showing jurors with high bodily sensitivity gory coloured images, produced the most prominent cognitive characteristics – unresponsiveness to both strong and weak defence evidence and the highest likelihood of conviction (2018: 344). The other experimental conditions she measured cued less intense disgust reactions in individuals, which resulted in the progressive reduction of the manifestation of physical disgust characteristics in judgements. Disgust toward a black and white photograph from individuals with high bodily awareness produced unresponsiveness to mitigating factors but manifested in fewer instances of aversion through condemnation – reflecting some characteristics of physical disgust, but not all. Whereas disgust towards black and white photographs from

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[13] Park et al. explain that physical disabilities can be considered physical disgust elicitors as they sometimes resemble signs of disease, and the physical disgust mechanism can be triggered by such cues (2003: 68).

individuals with low bodily awareness neither obstructed reason-responsiveness, nor manifested in aversion through condemnation (2018: 344).

Not only does this demonstrate a crucial feature of physical disgust, that its characteristics are expressed and experienced relative to the severity of the elicitor and the intensity of the individual's reaction towards it. Implying severe reactions could totally override judgements, moderate reactions might negatively influence judgments to some extent, but the individual retains some capacity for judgement, and mild reactions might not produce any cognitive interference, suggesting they retain evaluative capacities and expressions of physical disgust resemble judgements rather than reactions[14],[15].

It also supports the argument that Giner-Sorolla et al.'s characterisation of associative judgments in fact characterises physical disgust reaction. It shows that judgements Giner-Sorolla et al. characterised as associative not only contain physical disgust elicitors, but they also display physical disgust behaviours, providing clear evidence that it is the reaction to the physical component that is partially driving the judgement. It also shows the level of expression of cognitive characteristics in associative reaction directly depends on the intensity of the physical disgust reaction. Again, demonstrating a direct connection between the physical disgust elicitor and the cognitive characteristics of the reaction.

Sufficient evidence has now been presented to demonstrate that Giner-Sorolla et al.'s characterisation of associative disgust actually pertains to physical disgust and physical disgust can therefore be cognitively characterised as an automatic, inflexibly applied reaction that is intuitively triggered, not cognitively demanding, unresponsive to reason, context, and intentionality, and cannot provide cognitively elaborated reasons for their activation.

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[14] As displayed in Park et al.'s discussion of experiments.

[15] Given that in weak instances of physical disgust elicitation, such as the previously mentioned dead pigeon example, it appears as if the individual is able to respond to and identify reasons for the physical disgust reaction, it may be argued physical disgust possesses a capacity to appraise in a way identified by the IFT. However, given that in such instances the individual is not experiencing physical disgust intensely enough to experience its characteristic effects, it is possible to argue that the characteristics identified here are not attributable to the physical disgust mechanism, and such instances may be better understood as 'physical disgust judgement' rather than a physical disgust reaction.

2.4 Physical Disgust's Behavioural Profile's Compatibility with its Evolved Function

When considered against the evolutionary function established for this mechanism in Section 4 of the previous chapter, these behavioural characteristics are fitting as they all contribute toward poison or parasitic aversion. Facial contortion provides signalling to other organisms of a potentially dangerous disgust elicitor, nausea and sickness discourages ingestions and purges any ingested potential poison or parasite, and physical recoil serves to distance the individual from the elicitor. Offensiveness ensures the individual maintains distance and does not want to be exposed to the elicitor again, and memory biases ensure that they remember the offending entity. Contamination sensitivity makes the individual wary of the possible spread of a poison or parasite, and communication biases serve to make others aware of elicitors the individual detects, facilitating a reduction of group contamination, which in turn leads to a reduction in individual exposure.

A less cognitively elaborated reaction reduces the duration of exposure to the elicitor as the individual does not deliberate on how to resolve the elicitor. Also, the unreasoning reaction ensures the individual maintains their disgust judgement and does not change their mind and expose themselves to the potentially harmful entity. The fact these cognitive characteristics only emerge when an elicitor occurs as an object of evaluation and not when disgust is experienced extraneously also make sense as, compared to extraneous disgust, the elicitor remains present in their perception when it occurs as the object of evaluation, meaning the threat of contamination is still clear and present. Finally, physical disgust's cognitive characteristics emerging relative to the severity of the threat the elicitor is perceived to pose, demonstrates the physical disgust mechanism's commitment to ensure adequate aversion of the elicitor. Some elicitors, like a pool of vomit, may require a casual instance of aversion, whereas a diseased rotting corpse may pose a more significant contamination threat and require a significant level of aversion.

Finally, it is worth reiterating Piazza et al.'s findings that physical disgust has no moralising effects on judgments, and any associated moral content is derived from the nature of the act it is judging, not the fact it possesses an antecedent physical disgust elicitor. This is important to distinguish because a moralising physical disgust would have an active role in human moral behaviour, so it would be necessary to incorporate into the function of virtuous disgust. However, the Dual Mechanism Theory determines Physical disgust serves a

purely practical poison and parasite aversive function, that only influences moral judgements to fulfil its contamination aversion function, which is again in keeping with its attributed evolved function.

3 Social Disgust

Given the recency of the development of the idea of the character communication function of disgust, less literature exists establishing its behaviour and cognitive characteristics. However, through the previous comparison of social disgust to anger, a further reinterpretation of the IFT, and analysis of further studies, a picture can begin to be developed of its behavioural characteristics. Whilst this provides a less fleshed out characterisation of the emotion compared to physical disgust; the characteristics available are sufficient for the purpose of this thesis.

During their comparison of disgust to anger, Giner-Sorolla and Chapman identified that social disgust was sensitive to individual intentionality as experiments demonstrated that participant's disgust reactions increased when they were presented with evidence that the violation they were evaluating was intentional (2017: 84). As this demonstrates social disgust changed when the individual was presented with a justified reason for an increase, it therefore shows that social disgust is responsive to reason, context, and intentionality. This reason responsiveness can also be observed in Russell and Piazza's (2015) experiments, they found that disgust reactions increased towards people who consented to and desired transgressive sexual acts, again demonstrating a sensitivity to intentionality.[16]

This initial description of the cognitive characteristics of social disgust matches the IFT's account of appraised disgust reaction as it describes a response that can respond flexibly to contextual information. It was also established in Section 2.3 that the instances of appraised moral disgust Giner-Sorolla et al. identify constitute instances of disgust outside the

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[16] As Russell and Piazza's (2015) experiments contained a physical disgust elicitor as the object of evaluation in the form of deviant sexual behaviour, it may be questioned why the judgement is reason responsive given the previously established behavioural characteristics of a judgement that has a physical disgust elicitor as the object of evaluation. This instance can be perceived as a time in which the physical disgust elicitor present did not produce a reaction strong enough to interfere with the moral judgement, so, individuals retained the capacity to reason about the judgement. The experiments also utilised stories to elicit disgust which may vary in their capacity to elicit disgust based on content, and may be less effective than other means of elicitation, such as photographs.

influence of physical disgust and can also be identified as instances of moral social disgust. This therefore suggests that the IFT's characterisation of appraisals can be used to describe the cognitive characteristics of independently occurring social disgust, and entails that the experiments the IFT identified to evidence the behaviour of appraised disgust can be used to determine the cognitive features of social disgust.

First, Giner-Sorolla et al. cite Gutierrez and Giner-Sorolla (2007) who identified that social disgust had no influence over moral judgments whilst under cognitive load (2018: 267). More significantly, they also identified Russell and Giner-Sorolla's (2011b) second experiment which examined disgust towards disapproved of social groups (see footnote 12) identified individuals were able to justify their social disgust judgements with relevant reasoning (2011b: 640), demonstrating that social disgust provided cognitively accessible reasoning for its judgments.

A further characteristic of social disgust reactions identified previously by Hutcherson and Gross (2011) is that they are 'sticky' insofar as once a social disgust judgement is made it is hard to change or overcome (2011: 720). This may appear to be at odds with the reason responsive characterisation just presented, however, Hutcherson and Gross do not deny social disgust's malleability, they just recognise their research demonstrates that social disgust has a high standard when it comes to accepting mitigating reasons[17]. The nature of social disgust elicitor formation and acquisition can explain why this 'stickiness' occurs, however, this requires an elaborate explanation of the mechanics of social disgust elicitation and elicitor acquisition, so it will be presented in the following Section 4.2.1 once this account has been provided.

Finally, research from Simpson et al. (2006) demonstrated that social disgust judgments increased over time[18]. They measured individuals' social disgust reactions fifteen and thirty minutes after a social disgust violation was committed and results demonstrated that

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[17] Social disgust reactions appear to share some similarities with physical disgust reaction in this regard as the nature of the judgement appears to lead to attention memory biases to ensure aversion of a potentially contaminating elicitor in the future.

[18] Simpson et al. examine 'socio-moral disgust', however, examination of the 'socio-moral' disgust elicitors used establishes that all can be identified as indications of bad character and therefore social disgust elicitors. For example, exploitation of people in the third world by large companies, hypocrisy in politicians, ambulance chasing by lawyers, and child abuse from carers (2006: 35)

individuals experience more intense reactions as time passes. This can again be explained through the mechanics of social disgust elicitation so will be discussed in the following section.

Overall, evidence demonstrates that social disgust reactions are responsive to reason, context, and intentionality, and can provide cognitively elaborate reasons for their activation. Despite being reason-responsive such judgments are also characterised as 'sticky', being hard to undo once formed, and can increase in intensity once the initial judgement has been made. Given the emotion's evolved function, protecting the values and behaviours of the in-group through negative character judgements, these characteristics again make intuitive sense. To properly regulate social behaviour, it needs to be responsive to mitigating factors to recognise when instances of apparently transgressive behaviour can be justified. Reasons for judgements also need to be cognitively accessible so the individual can justify their judgements whenever necessary. However, judgements may still need to be 'sticky' as it enables the individual to remember past transgressors that might return to pose a threat to group stability in the future. Character judgements are also significant social indicators of a person's value and status, so they bear weight and re-evaluating a judgement requires firm evidence and compelling reasoning to do so.

4 Disgust Elicitation

This section will now address the question of how disgust is elicited and how elicitors are formed for each mechanism, this is necessary to conclude the account of the operation of disgust, and it is also important for later discussions of compatibility with Naturalistic Virtue Theories. It shall begin by presenting two different accounts of disgust elicitation and elicitor formation: social norm adherence presented by Kelly which follows Sripada and Stich's work in norm psychology, and meaning threat regulation presented by Hanna and Sinnott-Armstrong. The relative merits and shortcomings of each account will be identified, and it will be proposed that the strongest account of elicitation and elicitor formation relies on combining these two approaches as this overcomes their respective problems.

The social disgust mechanism's compatibility with this new account of elicitation and elicitor formation shall be established, and the merits of this account shall also be demonstrated through an exploration of its capacity to explain some of the characteristic behaviours of the

social disgust mechanism. This account of elicitation and elicitor formation's compatibility with the physical disgust mechanism will then be examined and it will be determined that whilst compatibility is indicated in some areas, certain behavioural characteristics of the physical disgust mechanism also suggest it is unsuitable to characterise physical disgust elicitation and elicitor formation. The section will conclude by recognising that the nature of elicitation and elicitor formation is important for social disgust, but not physical disgust. So, whilst it is important to establish an accurate picture of disgust, the question can remain unanswered here.

4.1 Social Norm Adherence

Kelly argues disgust elicitors are acquired from the motivational influence of social norms (2011: 119). He characterises norms as "rules regulating behaviour and governing social interaction" (2011: 108). This covers both conventional norms (non-moral socially determined patterns of behaviour such as greeting new people with a handshake) and moral norms (socially determined patterns of good and bad behaviour such as respecting the elderly or stealing). He then identifies that social norms are culturally developed, so disgust elicitors vary based on cultural determination (2011: 108). To explain Kelly's argument, an elaborated account of social norms is needed to establish some of their features.

Kelly grounds his understanding of norms (2011: 108) in Sripada and Stich's (2007) account who characterise them as "rule[s] or principle[s] that specify actions that are required, permissible, or forbidden independently of any legal or social institution" (2007: 282). Sripada and Stich then identify social level facts about norms, citing evidence showing them to be culturally universal (2007: 283) and further evidence (Brown 1991 and Sober & Wilson 1998) that norm adherence and norm violation punishment is ubiquitous in all human societies. They also provide evidence that norm adherence is ancient, not originating from one specific group (2007: 283) and there are norms that pertain to and govern every aspect of human life, no matter how large or small the matter is.

Sripada and Stich continue their characterisation by identifying that norms exhibit within group homogeneity and between group differences (2007: 283). They do acknowledge certain commonalities exist with norms across all groups, citing examples such as

prohibitions against killing, physical assault, stealing, and incest, however they recognise the rules that govern these norms vary drastically between groups (2007: 284). Additionally, they identify that norm adherence varies within groups depending on a variety of different factors such as the class of the people involved; the age, gender, and health of those involved (2007: 283), with a common example being that the elderly, the infirm, and pregnant women are exempt from fasting at Ramadan for health reasons.

Finally, Sripada and Stich then discuss the effect that norms have on the individual, first identifying they "exhibit a *reliable pattern of ontogenesis*" (2007: 285). Cross culturally, individual norm alignment begins in early childhood and comes to align with adult norms by adolescence, individuals also develop in line with the norms that prevail in their local cultural group, rather than their biological heritage[19]. Sripada and Stich then claim that individuals internalise norms (2007: 286) which leads to norms having a strong motivational effect on them, as evidence shows people are motivated to comply with norms even when there is little chance of personal gain, or, when others would not find out about the transgression of a norm[20]. The internalisation of norms also motivates punishment of norm violations, evidence from Sober and Wilson (1998) and Roberts (1979) shows that norm violations elicit both punitive emotions and punitive behaviours and that the punishment of norm violation is ubiquitous across all societies (2007: 288). Therefore, on Kelly's account social norms motivate the formation of disgust reaction, and the violation of norms instigates disgust elicitation.

4.1.1 Analysis of Social Norm Adherence for Compatibility with the Dual Mechanism Theory

Features of this account of elicitation and elicitor formation align with the previously identified characteristics of social and physical disgust mechanisms, suggesting suitability as an account of elicitor formation. Regarding social disgust, Sripada and Stich's account recognises that the main function of 'negative' emotions in norm psychology is "the generation of punitive motivation directed at those who violate norms" (2007: 295).

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[19] House et. al.'s (2019) cross cultural study again provides evidence that corroborates both these claims made by Sripada and Stich

[20] They justify this claim about the motivational effect of norms citing various data from studies in social psychology and experimental economics (2007: 287-288) that provide evidence for the human inclination for non-selfish norm adherence.

Rottman et. al. characterise social disgust as a punitive emotion that functions to preserve the values and behaviours of the in-group through stigmatisation and ostracization of the out group. This characterisation of social disgust directly fits Sripada and Stich's description of negative emotions as a norm enforcement mechanism, as it punishes the transgression of collective social values to coerce individuals into adherence to normative behaviour. Further features of the emotion, like the cuing of shame, also demonstrates the internalisation of the norms enforced by the emotion and the motivation the emotion exerts on the individual to adhere to norms.

Furthermore, the development of norms outlined by Sripada and Stich aligns with the development of disgust outlined by Rottman et. al.[21]. Sripada and Stich predict that norm development begins in early childhood and finishes at some point during adolescence, matching Rottman et. al.'s description of the development of disgust (2018: 49-50). As social disgust develops norm adhering reactions in an identical trajectory to norm development, this heavily implies it is norms that motivate and inform the development of disgust.

Finally, social disgust's reason responsivity could be identified as a feature of norm enforcement — facilitating the recognition of the variability in norm adherence established by Sripada and Stich. Sripada and Stich determined that transgression of norms is allowed, approved of, or even necessitated in some instances depending on reason and circumstance, such as in the Ramadan example. Similarly, social disgust reactions can be mitigated or overcome given sufficient appropriate evidence or reason. Given the norm enforcement function attributed to emotions by norm psychology, the circumstances for appropriate transgression attached to norms can therefore be seen to inform the reasons for overcoming social disgust reactions. A norm does not need to be enforced if the mitigating criteria for it has been fulfilled, therefore, the social disgust reaction does not have to occur to enforce the norm. This therefore demonstrates that the behavioural characteristics of social disgust are therefore compatible with the mechanics of norm psychology.

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[21] A point House et al.'s (2019) studies corroborate in their analysis of the development of disgust across eight different communities.

Regarding physical disgust, previous characterisations of the mechanism identified there are universal physical disgust elicitors (like aversion to faeces and vomit) that are ubiquitous across cultures, yet attitudes and rules regarding these elicitors can be seen to vary between social groups. This describes a landscape of disgust elicitation very similar to the one described by norm psychology about the formulation of normative beliefs. Alongside this fact, the characterisation of physical disgust established that elicitors can be transmitted through communication and adherence is motivated through the cuing of shame in those who do not find certain things disgusting. So, physical disgust can again be seen to fulfil a role similar to the one norm psychology attributes to negative emotions.

However, instances of norm transgression can be identified that challenges Sripada and Stich's claims about the motivational capacity of norms and prompts doubts about its suitability as an account of elicitor formation. For example, a social group may consist of both vegetarians and meat eaters, these members could disagree with each other's choices, but co-exist fine within the same group. Sripada and Stich's account establishes that the set of norms that constitutes the dominant group ideal[22] would punish and coerce the transgressing group members to motivate them to change their behaviour, or exile the transgressor for counter normative behaviour. However, anecdotal evidence demonstrates this does not occur, which suggests the motivational capacity of norms is not as powerful as initially proposed, and prompts doubts about the capacity of norms to motivate disgust elicitation and inform elicitor acquisition.

4.2 Meaning Threat

An alternative account of disgust elicitation is presented by Hanna and Sinnott-Armstrong who propose that disgust is a response to epistemic unrest (2018: 96) and activates when meaning structures are threatened (2018: 102). Hanna and Sinnott-Armstrong define meaning structures as "psychological frameworks of predicted relations between ideas and concepts. These epistemic structures are used to impose order and meaning to the world" (2018: 100). These epistemic structures can also be understood to develop contextually because they are informed by local teaching and experience. Meaning is threatened when the individual encounters an event that challenges or runs contrary to their developed

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[22] Be it the vegetarians or the meat eaters.

structure of meaning; when "ideas about what ought to be (both in the moral and amoral sense) do not correspond to what is" (2018: 101). They identify that individuals respond to meaning threat with threat compensation which "takes the form of cognitive processing that effectively resolves the inconsistent stimulus", often reappraising the stimulus to fit back into an existing framework, or, incorporating it into a new framework (2018: 101).

Hanna and Sinnott-Armstrong initially connect disgust to threat compensation through terror management theory (TMT) and disgust's symbolic and empirical relationship with death (2018: 101) — identifying that disgust occurs as threat compensation when meaning is threatened by symbolic reminders of death (2018: 102). They expand the connection between disgust and meaning through the recognition that the majority of TMT "can be understood within a general biological model … which explains the findings of TMT with a generalised anxiety system that responds to discrepancies between stimulus and meaning framework" (2018: 102). They observed that a multitude of different kinds of threats to meaning frameworks elicit the compensatory responses described by the TMT, inferring that TMT and subsequently disgust's TMT function can be synthesised within this generalised anxiety system. Hanna and Sinnott Armstrong then present a process model of threat defence and identify features of disgust that demonstrate it fulfils this role as a threat defence mechanism (2018: 102-106).

4.2.1 Analysis of Meaning Threat for Compatibility with the Dual Mechanism Theory

Hanna and Sinnott-Armstrong recognise that "threat compensation is an extremely broad literature. Meaning threats can occur at the perceptual, epistemological, motivational, and sociomoral levels" (2018: 107). As they identify that disgust-based meaning threat can occur in many different ways on many different conceptual levels, it runs the risk of being too broad to be informative. However, integrating meaning threat with the understanding of disgust presented by the Dual Mechanism Theory serves to narrow down which specific threats to meaning trigger disgust, and demonstrates the compatibility between the Dual Mechanism Theory and meaning psychology as an account of elicitation.

First, the identification that social disgust is expressed towards displays of character the individual disapproves of can determine the meaning structure social disgust regulates and the eliciting cues it responds to. Individuals develop meaning structures concerning what

constitutes good character and when the individual views acts, appearances, or expressions of belief that challenges this, social disgust activates to resolve the threat by identifying it as a display of bad character, one the individual disapproves of, qualifying it within this meaning structure.

The behavioural characteristics of social disgust also demonstrate compatibility with this proposed form of disgust elicitation. First, social disgust's reason responsivity demonstrates that the emotion engages with meaning structures before it activates. For example, the individual meaning structures concerning good character may have established principles regarding when it is acceptable to laugh at someone else's misfortune. It may be considered acceptable to laugh at a close friend if they accidentally walk into a pole walking down the street, provided they are unharmed. However, an individual may be socially disgusted by someone who laughs at an old person who has fallen in the street because this may lead to serious injury, and their meaning structure establishes that a person with a good character wouldn't laugh and would usually help in that situation. Therefore, reasons function to facilitate threat resolution, justifying why a behaviour fits in a meaning structure, or identifying that a behaviour does not fit the meaning structure and therefore triggering social disgust to resolve it.

The 'stickiness' of social disgust reactions identified by Hutcherson and Gross (2011) can also be explained by the meaning threat-based account of disgust elicitation and elicitor acquisition, which further establishes compatibility between social disgust and threat regulation by demonstrating meaning psychology can account for established behavioural features of the emotion. When compared to act evaluation communicated by anger for example, character judgements communicated through social disgust can be seen to make more significant claims as they are judging the nature of the individual as whole. When forming a new meaning structure about an individual the agent has just met then, an initial social disgust judgement will provide significant foundational information for the agent's meaning structure regarding their character. Given that this significant judgement is the only frame of reference the agent has for the nature of the individual's character, it may be more likely that this judgement remains in the individual's cognition, and is only then undone with sufficient evidence to the contrary.

Alternatively, an agent may have a well-developed meaning structure about an individual's bad character, informed by multiple instances of social disgust eliciting behaviour. The multiple instances of social disgust elicitation (that the previous paragraph identified constituted a significant judgement) reinforce and further develop the agent's meaning structure regarding the individual's character leading to the formation of an entrenched, and firmly held perspective on the individual's bad character that requires significant evidence to mitigate, and can reasonably be described as a 'sticky' judgement.

Finally, Simpson et al.'s identification that social disgust judgments increase in intensity over time can also be explained through a meaning threat-based account of disgust elicitation. After the initial disgust reaction to the meaning threat, the individual will have time to further deliberate about the nature of a violation, it is likely they can identify further features of the violation that further challenges their meaning structure[23] and they therefore must experience an increase in social disgust to adequately respond to this meaning threat.

Compatibility between the physical disgust mechanism and the meaning threat regulation account of disgust elicitation can also be observed by recognising that death anxiety and the generalised anxiety system can be triggered by the threat of ingesting poisonous or parasitic entities. Individuals therefore develop meaning systems regarding safe interactions with such elicitors, and meaning threat occurs when the individual is exposed to them in a way that is incompatible with the meaning system. This incorporation is supported by a discussion in Hanna and Sinnott-Armstrong's paper in which they identified elicitors explicitly associated with contamination threat, such as body envelope violations, hygiene violations, and disgusting animals, as prime candidates that threaten meaning (2018: 106).

Elsewhere, Hanna and Sinnott-Armstrong also recognise that "defences against meaning threat are thought to be mounted at multiple levels" (2018: 102) and identify characteristics attributed to the physical disgust mechanism, like physical withdrawal, eye narrowing, and attention selection, constitute an information limiting form of threat defence (2018: 104).

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[23] For example, an individual may initially perceive the act of stealing from an elderly person as socially disgusting because the act of stealing indicates the possession of character traits the individual disapproves of. Further consideration of the violation then also identifies aspects of it that display further bad character traits, such as a willingness to exploit the vulnerable and an unwillingness to face the consequences of their actions.

They also allude to the reason obscuring features of physical disgust, stating "disgust can also suppress more abstract information processing" (2018: 104) and identify this as a threat defence as it downregulates cognition of the elicitor. This therefore demonstrates behavioural features of the reflex are compatible with the mechanics of threat regulation, further illustrating compatibility between physical disgust and meaning threat regulation as a form of elicitation and elicitor formation.

Finally, using meaning threat as an account of disgust elicitation can also explain why disgust occurs in varying degrees toward different elicitors in both social and physical disgust. Once the elicitor has been examined against the individual's meaning structure, the level of occurrent disgust represents the level of threat the elicitor poses to meaning. With less intense disgust reactions occurring to resolve smaller threats to meaning, and more intense reactions to resolve larger meaning threats.

4.3 Integrating Meanings and Norms

Reviewing threat regulation and norm enforcement demonstrates that they present significantly different accounts of disgust elicitation and elicitor acquisition. Norm enforcement describes a process that is somewhat automatic and mechanical in which disgust is involuntarily determined and activated by coercive social pressures. Whereas threat regulation describes a process of elicitor formation that the individual has more control over, constructing meaning systems based on reasoned experiences. It therefore appears as if they must be considered as independent accounts of disgust elicitation and elicitor acquisition.

However, by accepting a 'softer' account of social norms, the two accounts can be integrated, which resolves the problem of norm deviation and provides a more comprehensive account of elicitor formation. A softer account of norms views them as cultural trends that are coercive but not categorically compelling. They still possess a motivational capacity given that the communication of norms and expression of emotion has been proven to coerce individuals into norm adherence[24], which results in some individuals accepting norms and reacting negatively to transgressors. But on this view, norms do not absolutely determine the individual's beliefs and attitudes — the individual

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[24]Exemplified in the coercion exerted by shame cued by disgust judgements.

quantifies the communicated norm against their meaning system, establishing whether it is compatible or not. If it is, they will accept it and incorporate it into their meaning structure. If it is not, it now poses a meaning threat and threat resolution will attempt to resolve through incorporation into other less relevant meaning structures or through an adverse reaction.

Returning to the vegetarian/meat eater example it is now possible to explain why in-group differentiation in norm adherence occurs. The individual's meaning structure may recognise that adherence to the counter normative practise (be it vegetarianism or meat eating) constitutes a perfectly valid, alternative mode of living that does not indicate anything morally problematic about the character of the individual. In fact, the meat eater may recognise vegetarianism as a morally commendable, socially valuable action. The agent's meaning structure therefore enables them to understand that despite constituting a mode of living they do not adhere, adherence to the counter normative practise is not socially disgusting behaviour, and therefore adherence to the two differing practises can occur within the same group.

This understanding can be further nuanced by the recognition that norms may influence an agent to construct a meaning structure that finds the counter normative practice socially disgusting. However, this social disgust judgement can be quantified against the broader meaning structure the agent possesses about the characters of those peers who adhere to the counter normative practice. The agent may find that despite adhering to a practice they find socially disgusting; these peers generally possess good characters, and it does not make them a bad person. The agent may therefore remain within the group but 'agree to differ' with those they disagree with.

Previous discussion in Sections 4.1.1.and 4.2.1. established that both meaning threat and norms adherence are compatible with both social and physical disgust, so no further discussion is necessary to establish the compatibility of each independent account with the Dual Mechanism Theory. Furthermore, as the integrative approach identifies meaning threat as foundational in disgust elicitor formation and norms as influential, establishing the feasibility of integrating the two approaches only requires evidencing that the formation of meaning structures tends to align with norms to demonstrate their coercive nature, which

previously presented evidence in Chapter 2 Section 3.1 from Rottman et al. (2018) and House et al. (2019) has demonstrated.

The integration of norms and meanings is also compatible with the development of disgust outlined by both Rottman et al. and House et al.. Rottman et al. determined that disgust reactions begin developing in early childhood, at which point they are basic and closely adhere to local social norms (2018: 50). It makes sense that the development of meanings initially adheres to local norms as norms facilitate a common ground from which to gain a basic understanding of and learn how to correctly make disgust judgments, from which unique meaning structures can be developed. Rottman et. al. then present evidence that disgust sensitivity peaks at adolescence[25], and also identify that adolescence is the time when children experience "increasing contact with non-kin" (2018: 50). This again seems compatible with meaning formation as the autonomy granted at adolescence enables individuals to gain unique knowledge and experience about the world, nuancing their developing meaning structures and determining whether they commit to dominant cultural norms or form their own meaning structures.

Finally, it is worth noting that norms coercing the formation of meaning structures also serves to narrow down the field that determines disgust related meaning threats. It does not do so in a domain specific way, as meaning threat can still occur across perceptual, epistemological, motivational, and sociomoral levels. But alongside the recognition that displays of bad moral character and instances of poison and parasite threat trigger meaning threat, the added specification that disgust elicitation and elicitor formation tends to follow socially normative trends narrows down the field to accurately indicate where the disgust inducing meaning threats lie in each of these domains.

4.3.1 Scepticism of the Efficacy of this Approach as an Account of Physical Disgust Elicitation

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[25] 'Peaks' does not mean that disgust reactions solidify and become permanent, instead it implies the individual becomes fully sensitive to disgust elicitors and has a developed suite of disgust inducing meaning threats. This entails that disgust reactions can change over time, further illustrating compatibility with meaning threat as new experiences may alter the individual's meaning structures, forming different disgust inducing meaning threats.

Whilst the previous section suggested a combination of threat regulation and norm enforcement provide the best account of disgust elicitation and elicitor acquisition, further features unique to physical disgust challenge whether this is in fact an adequate method of characterising the mechanisms of elicitor formation and elicitation process.

The characterisation of meaning threat-based elicitation suggests the disgust mechanism 'consults' with the meaning structure before it activates — reviewing contextual information against their constructed understanding of the world and then activating based on the outcome of this review. However, the Dual Mechanism Theory characterises physical disgust as a rapid reaction, unresponsive to reason, context, and intentionality, and unable to provide cognitively elaborated reason for action. This unresponsiveness to relevant information demonstrates it is unresponsiveness to mitigating factors and remains active even when presented with adequate reasons for overcoming a physical disgust reaction. If meaning structures did control physical disgust elicitation, it seems possible that evidence that the elicitor is harmless should be enough to override the instance of elicitation, as it no longer presents a threat to meaning. However, physical disgust is unresponsive to reason in both its activation and the duration for which it is active, suggesting that the meaning structures have no part in physical disgust elicitation[26]. Its inability to produce cognitively elaborated reasoning for elicitation also suggests that it has not 'consulted' a meaning structure.

Furthermore, the speed at which physical disgust activates also suggests the reflex does not have time to consult a meaning structure before activation, it rapidly deploys towards a perceived instance of poison or parasite threat, regardless of whether the elicitor poses a genuine threat or not. This presents a picture of the reaction that suggests it behaves in an automatic and reflexive way, activating instinctively towards cues that are associated with poison and parasite threats. Instead of deliberately engaging with a structured understanding of poison and parasites, determining whether this entity is capable of posing

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[26] This is reflected in physical disgust's proclivity for false positives, demonstrating a systematic inclination to ignore relevant contextual information when responding to elicitors.

a poisonous or parasitic threat, and whether this currently threatens their established understanding of safe interaction with the elicitor.[27]

An alternative perspective may be to accept that meaning structures do have this reason responsive capacity, but are also capable of engaging with physical disgust in this rapid, associative manner, given the nature of the threat posed by poisonous and parasitic entities. Without further experimental evidence, both perspectives on physical disgust's relationship with meaning threat remain feasible, meaning that justified doubt can be cast on the proposed method of disgust elicitation being suitable for physical disgust elicitation.

The Dual Mechanism Theory has also characterised each disgust system as separate mechanisms with separate functions, presenting social disgust as a social emotion that regulates complex interpersonal relationships and physical disgust as a reflex predominantly interested in self-preservation, fulfilling a simple yet vital function. Given the significant difference in the nature of the aversion facilitated by the two mechanisms, it is feasible this may necessitate the use of different elicitation systems. The need for social disgust to respond to contextual information to establish the legitimacy of its judgments entails it must produce meaning structures to appropriately process reactions. Whereas the necessity to protect the individual from potentially life-threatening contamination may require a more sensitive, more cautious, but less deliberative form of elicitation.

However, despite being different mechanisms, similarities between the function of each mechanism will be discussed in the following Section 6, identifying that physical and social disgust in fact serve a similar contamination avoidance function. This may instead point toward the fact that physical and social disgust share the same systems of elicitation. As, despite their apparent differences, individuals might perceive the contamination threats both mechanisms respond to as posing similar threats to meaning. Again, further research will be required to establish the truth of this, but it is enough to again cause doubts about the nature of physical disgust elicitation.

Sufficient evidence has therefore been presented to establish doubt that the proposed form of disgust elicitation is an adequate fit to characterise physical disgust elicitation. Whilst this

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[27] This discussion also serves to identify some of the shortcomings of integrating physical disgust into a conception of elicitation via meaning threat that were not addressed in the previous section.

presents an interesting ambiguity in the characterisation of disgust, discussion will stop here as later discussion will identify that it is the behaviour of physical disgust once activated that causes a problem for Naturalistic Virtue Theories — not the nature of elicitor formation — so a direct determination of physical disgust elicitation and elicitor acquisition is not necessary. This discussion remains useful however as it presents an accurate representation of the current state of the work determining the nature of disgust elicitation and elicitor acquisition, identifying it as an underdeveloped field in the literature that would benefit from further research.

5 Categorising Each Disgust Mechanism

Throughout Chapters Two and Three, social disgust has been referred to as an emotion, whilst physical disgust has been referred to as a reflex[28]. A discussion of this taxonomy has been postponed to enable the identification of features that draw out the differences between the two mechanisms and enable the explanation of why each one is categorised as such. Now that these features have been sufficiently elaborated, this explanation can be given.

A clear difference between the two mechanisms has been established throughout the formulation of the Dual Mechanism Theory. Chapter Two began by identifying that each mechanism had a distinct evolutionary origin which each informed a unique evolved function, and this current chapter then identified that each disgust mechanism possessed different, seemingly opposing[29], behavioural characteristics, and potentially different forms of elicitation and elicitor acquisition. A comparison to anger in Section 5.2 of the previous chapter determined that social disgust could be accurately characterised as an emotion, but given this established functional difference between physical and social disgust — with physical disgust serving to protect the physical health of the organism as opposed to fulfilling a social regulatory function — and the behavioural differences that occur as a result

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[28] Physical disgust's characterisation as a reflex has been consistently maintained, apart from when other scholars work characterising physical disgust as an emotion has been referenced or discussed.
[29] With social disgust being described as reason responsive and capacity of providing cognitively elaborated reasoning for its activation, and physical disgust being described as reason unresponsive, incapable of providing cognitively elaborated reasoning for its activation.

of each mechanism fulfilling its evolved function, it does not seem appropriate to also categorise physical disgust as an emotion.

Fischer and Truog provide a general description of a reflex as "an action or movement of the body that happens automatically, or without thinking, as a reaction to something. These definitions contain three core components: a stimulus, subconscious processing, and a resulting reaction." (2015: 544) Reviewing the characteristics of physical disgust presented in the past two chapters, it can be seen to fit this description—the disgust elicitor (stimulus), triggers a response that produces a characteristic aversive reaction (resulting reaction/bodily action)[30]. The subconscious processing of a physical disgust reactions was not established in the previous characterisation, however, cognitive characteristics attributed to physical disgust, such as the inability to access the reasoning for its activation, suggest it is processed unconsciously (because if it were processed consciously, it is likely we would have access to the reasoning for its reaction). Also, an intuitive review of our own disgust reactions suggests there is no explicit process in the activation of disgust — we immediately experience a physical disgust reaction once a potential stimulus has been identified. So physical disgust can reasonably be understood to be subconsciously processed.

Furthermore, Waterhouse and Campbell (2017: 201) establish that reflexes are generally understood to function as automatic responses to physical threats. For example, an individual would instinctively snatch their hand away from a hot surface, or squint on a bright day. The function of physical disgust established by the Dual Mechanism Theory — protecting the individual from poison and parasite ingestion —can be recognising as fulfilling this physical threat defence function, and the conditions for activation identified in this section and elsewhere[31] —operating subconsciously, on a hair trigger, and being prone to false positives as result of its rapid activation and not requiring confirmation its elicitor posed a genuine poison or parasite threat — paints a picture of its activation criteria that

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[30] Fischer and Truog also recognise that the resulting reaction can be physiological, as well as physical (2015 545), which also accommodates for the characteristic physiological experience of nausea and its associated bodily effects, attributed to physical disgust.
[31] Section 4 of the previous chapter.

demonstrates it embodies this characteristic 'automatic' response. Therefore, physical disgust can be seen to fulfil the described function of a reflex.

The Dual Mechanism Theory's account of physical disgust therefore matches the description and function of a reflex, which provides initial compelling evidence that physical disgust is a reflex[32]. More work connecting physical disgust to the psychology of reflexes will have to be done to solidify this characterisation. However, this initial examination demonstrates strong compatibility and further elaboration would require a more sophisticated examination, which is too lengthy to engage with here, so the presentation of evidence shall end here[33].

With this in mind, a clearer distinction can be drawn between physical disgust and social disgust in that physical disgust can tentatively be described as a reflex which functions to protect the body from physical threats that take the form of poisonous or parasitic threats, and its ascribed cognitive characteristics facilitate the successful fulfilment of this function, whereas social disgust can definitely be described as a social regulatory emotion which functions to enforce social boundaries by maintaining the values and traditions of the in-group and rejecting and stigmatising the out group through the communication of disgust towards character traits, and its ascribed cognitive characteristic facilitate the successful fulfilment of this function.

6 Why the Physical and Social Mechanism are Both Disgust

The characterisation of disgust presented throughout these two chapters has established significant differences between the two mechanisms. These differences were clearly expounded in the previous section and may prompt the question of why both mechanisms may be labelled as 'disgust'? Specifically, it may be understood why physical disgust can be identified as disgust as it fulfils the archetypical contamination avoidance function, whereas social disgust fulfils a complex social regulatory function, distinct from the traditional understanding of disgust. This section will describe how overall functional similarity and

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[32]A difference in taxonomy and function also provides a further argument for the fact that social and physical disgust do not share the same elicitation system, as they do not share the same 'cognitive role' and may therefore have different systems controlling their activation.

[33] Also, whilst this is an important discussion in the accurate characterisation of disgust, for the purposes of this thesis it is sufficient to establish that physical and social disgust constitute distinct mechanisms, each with their own unique function and behaviour.

behaviours that lead to mutual benefits between mechanisms shows how both mechanisms can be considered disgust, and how content overlap may have led to both mechanisms receiving the label disgust.

Despite perceived differences, analysis demonstrates physical and social disgust fulfil similar overall function as both facilitate the aversion of elicitors. Physical disgust facilitates the aversion of poison and parasite elicitors, and social disgust facilitates the aversion of characters the individual disapproves of. Similarities in overall functions can be extended by recognising that this aversion is targeted towards different forms of potentially harmful contamination threats. Physical disgust enables the aversion of contamination from poison and parasites, which pose a direct physical threat to the individual's life and health. Whereas social disgust enables the aversion of individuals that may 'contaminate' the group with different practices and beliefs, weakening the social structure of the group. This also has the potential to cause physical harm as a breakdown in group unity may lead to less efficient operation in their respective environments, leading to group dissolution and individual vulnerability.

This similarity in function is illustrated by the fact that the devices which facilitate aversion within each mechanism are mutually beneficial for the other mechanism in instances of coactivation. Physical disgust can benefit social disgust as its engendered desire for physical distance serves as a visual and physical manifestation for the aversion of a social disgust elicitor, to better identify and ostracise the offending individual. Offensiveness and memory biases serve to cement the offending event that also induced social disgust in the agent's mind so they can remember both the transgressor and the event to facilitate future aversion of the agent if necessary. The disgusted face also serves as a signal to others that someone has committed a socially disgusting act – better identifying the transgressor.

On the other hand, social disgust can benefit physical disgust as elicitor avoidance facilitated through shame, reputation attacks, and social coercion enables aversion without physical contact, which reduces the risk of poison and parasite exposure. The product of social disgust, isolation, exclusion, and ostracization of elicitors is also beneficial as it facilitates the clear identification of elicitors and their removal from contamination proximity, again reducing the risk of exposure.

The similarity in aversive behaviour is in fact so great that the activation of one mechanism may facilitate successful aversion of elicitors for the other. For example, physical disgust towards signs of disease, phenotypic difference, or morphological irregularities present in an unfamiliar social group may facilitate sufficient avoidance of that social group so the individual does not have to expose themselves to the values or behaviours that elicit social disgust. Similarly, an individual may possess a social disgust attitude towards individuals that engage with physical disgust elicitor in a certain way. For example, an individual may disapprove of a social group's attitude towards the dead in which they engage with complicated funeral rites that may be potentially contaminating for the inexperienced, the individual's social aversion towards this group's attitude towards the dead may therefore facilitate physical contamination avoidance. By socially ostracising these individuals, the agent can avoid the physical disgust elicitor before they are exposed to it. Thus demonstrating that the aversion facilitated by physical and social disgust is so similar they can in fact be used as an alternate method of fulfilling the aversive aims of the opposing mechanism in some situations.

Rottman et al.'s work identifies a further benefit of this reciprocal functioning as they identify "Diseases carried by foreigners can be more dangerous than diseases present in one's home environment because of human immune and behavioural adaptations to local threats, which leave the system unprepared to fight foreign parasite" (2018: 43). By facilitating aversion of the out group, social disgust also facilitates aversion to these potentially more harmful diseases, so it directly contributes to the function of the physical disgust mechanism.

Finally, significant content overlap between physical and social disgust lead to frequent instances of coactivation. Social disgust judgements often contain antecedent physical disgust elicitors. For example, there are socially determined conventions concerning behaviour involving various physical disgust elicitors such as the preparation, consumption and disposal of food, the production and disposal of waste, sexual habits, hygiene habits, and bodily modification habits. All of which, if not adhered to, trigger both social and physical disgust. As two mechanisms that served similar aversive functions and were mutually beneficial for each other's function frequently activated together, it is possible to see why such mechanisms developed the same linguistic label.

7 Conclusion

The previous chapter established the foundations of the Dual Mechanism Theory, identifying that disgust consists of two unique mechanisms: Physical disgust, which fulfilled a poison and parasite aversive function, and social disgust, which protected the values and behaviours of the ingroup through stigmatisation and ostracization of the out group through negative character judgments. This chapter completed the Dual Mechanism Theory by identifying the behavioural characteristics of each mechanism, discussing the nature of elicitor formation and acquisition, classifying each mechanism, and explaining how, despite perceived difference, both mechanisms can be considered disgust.

Physical disgust was characterised by an attempt to distance oneself from the elicitor, the individual pulling the characteristic 'gape' face, and was often accompanied by an experience of revulsion and repulsion which triggered nausea and vomiting. It was also accompanied by a sense of oral incorporation, a sense of offensiveness, contamination sensitivity, and attention and memory biases. A critique of Kelly's account of the downstream effects of physical disgust using Piazza et al. and Giner-Sorolla et al.'s IFT determined that physical disgust only negatively affected judgments in which it occurred as the object of evaluation, making them harsher and more severe. A reinterpretation of the IFT then revealed that physical disgust is cognitively characterised as unresponsive to reason, context, and intentionality, and does not provide cognitively elaborate reasons for its activation. Finally, discussion determined physical disgust served a purely practical poison and parasite aversive function and did not have any independent moral content.

Through examination of previous evidence and further reinterpretation of the IFT, social disgust was then characterised as responsive to reason, context, and intentionality, and provided cognitively elaborated reason for its activation. Further evidence showed it produced 'sticky' judgments and increased in severity with time from the initial violations.

Discussion then addressed the nature of disgust elicitation and elicitor formation for both mechanisms. It characterised two apparently competing accounts, social norm adherence and meaning structure creation, and discussed the compatibility of each with the Dual Mechanism Theory. It then suggested that an integration of both accounts, recognising that elicitors were formed by meaning structures that were influenced by social norms, provided

the most comprehensive account whilst also solving issues with the social norm account. This form of elicitation and elicitor acquisition was deemed compatible for social disgust, however, its compatibility with physical disgust was examined further and it was identified that certain features of the emotion suggested this account does not provide an adequate explanation for physical disgust elicitation and elicitor acquisition. Discussion ended recognising that whilst this remained an interesting open question, it was not necessary to determine the answer here as the nature of physical disgust elicitation was not relevant for any further discussions in this thesis.

The chapter then explained why, in light of the characterisation of the mechanisms presented throughout these two chapters, social disgust is best described as an emotion, and physical disgust is best described as a reflex as it matched the description and function ascribed to reflexes. It then concluded by discussing why, despite identified differences, the physical and social mechanism can both be considered disgust, identifying that both facilitated aversion of harmful contamination and suggesting that both came to be labelled as disgust due to content overlap.

This concludes the characterisation of the Dual Mechanism Theory, and the following chapter will now use this established characterisation to begin exploration of potential problems it poses for naturalistic virtue theory.

Chapter Four - Naturalistic Virtue Ethics and The Dual Mechanism Theory

1 Introduction

Having established that Naturalistic Virtue Theories could turn out to be incompatible with the nature of emotion and then developing an account of disgust suitable for compatibility assessment with virtue ethics, the thesis shall now establish and explore the problem the Dual Mechanism Theory creates for Naturalistic Virtue Ethics.

Discussion will identify that the Dual Mechanism Theory causes the problem of motivation interference for Naturalistic Virtue Theories, which establishes that physical disgust can interfere with an individual's appropriately virtuous reasoning and action. Analysis of this problem will span the following three chapters with the present chapter establishing the existence of the problem; identifying in which instances of virtuous behaviour and disgust elicitation the problem occurs, and which behaviours of disgust cause the problem. Chapter Five further contours the problem, determining how exactly physical disgust interferes with cognition and how this affects virtuous behaviour. Chapter Five will also identify further characteristics of physical disgust that affect motivation interference and determine how these features extend the problem for Naturalistic Virtue Theories. Finally, Chapter Six refines the problem, identifying the precise issue motivation interference causes for Naturalistic Virtue Theories, and explaining why it is not an issue that is easily overcome.

This chapter will begin by presenting the methodology of problem identification, it will determine that Naturalistic Virtue Theories and the Dual Mechanism Theory attribute disgust different functions which leads to the identification of three potential points of incompatibility. It will then explain that because one of these points of potential incompatibility raises a problem that is not unique to disgust, only two of these potential points of incompatibility will be addressed in this thesis.

To aid the examination of compatibility between Naturalistic Virtue Ethics and The Dual Mechanism Theory the chapter will then recap the Naturalistic Virtue Ethical description of the behaviour of virtuous emotion, and also briefly formulate Kelly's (2011) account of disgust. Kelly's account will be used to provide an additional perspective from which to examine compatibility, this can then be compared to the Dual Mechanism Theory's

response to each point of potential incompatibility to help determine where any problems lie when incompatibility is established.

The chapter will then proceed to examine each presented account of disgust's compatibility with the Naturalistic Virtue Theories, beginning with an assessment of their capacity to produce appropriately virtuous disgust reactions, and then determining whether the account of disgust each present has the capacity to interfere with virtue.

In examining each theory's capacity to produce appropriate virtuous disgust reactions, discussion will identify that Kelly's theory presents an account of disgust that cannot behave appropriately when it is a necessary emotion for virtuous behaviour because of his characterisation of disgust as unresponsive to reason in all situations. Whereas the Dual Mechanism Theory's reason responsive characterisation of social disgust is compatible with the behaviour of emotion described by Naturalistic virtue theory and can therefore produce appropriately virtuous reactions.

Analysis of disgust's capacity to interfere with virtue will determine that both Kelly's account and the Dual Mechanism Theory identify that physical disgust causes some form of virtue interference that can inhibit the appropriate display of virtue in moral situations. Therefore, both theories demonstrate Naturalistic Virtue Theories provide an inaccurate account of the psychology of disgust.

2 The Methodology of Problem Identification

Identification of the potential problems disgust could cause arose from considering the account of the function of disgust established by the Dual Mechanism Theory against the account of the function of disgust established by Naturalistic Virtue Theories. Chapter 1 Section 4 determined that disgust functioned as an aesthetic moral reaction to displays of vice in Naturalistic Virtue Theories, whereas the Dual Mechanism Theory determined that disgust fulfilled two unique functions — a poison and parasite aversion function and a character evaluation function.

Despite functional compatibility being suggested by the fact that the social disgust mechanism could be conceived as analogous to the identified function of virtuous disgust — as social disgust towards character traits could occur in response to any display of vice, it

could be considered to be making aesthetic judgements in response to displays of vice. The general, non-virtue specific development of disgust described by the Dual Mechanism Theory may lead to the development of characteristics and behaviours that are incompatible with Naturalistic Virtue Theories.

From this, three potential points of incompatibility can be identified, first, the nature of elicitor acquisition and disgust behaviour may be unable to produce appropriately virtuous disgust reactions. Second, once activated, in service of these natural functions that developed without virtue specifically in mind, disgust may behave in a way that inhibits virtuous behaviour. Third, if disgust is able to produce virtue-appropriate reactions, the nature of elicitor acquisition may be unable to produce a suite of disgust reactions sufficient for a fully virtuous disgust response.

Examination of disgust's relationship with virtue in this thesis will focus on the first and second type of incompatibility, as the first form of incompatibility directly determines the Dual Mechanism Theory's capacity to form and express virtue-appropriate disgust reaction, and discussion will establish a problem unique to disgust that manifests the second form of incompatibility. However, the third form of incompatibility shall not be addressed in this thesis because, despite there being an identifiable problem, the problem produced can be determined to be one which is not unique to disgust, and examination of this problem would benefit from being considered in a different context.

The problem that manifests this third point of incompatibility shall now be briefly presented here to recognise its existence and identify it as a worthwhile area of further examination, but also explain how it expresses a larger issue and why it is better discussed in relation to this issue.

2.1 Recognition of the Problem of Contextually Developed Social Disgust

The problem can be stated as followed: Discussion in Section 5.1.2 of this chapter will determine that Dual Mechanism Theory presents an account of disgust capable of forming appropriately virtuous disgust reactions, however, the Dual Mechanism Theory determines individuals develop a contextual capacity for virtuous social disgust which is insufficient for the individual to be considered fully virtuous.

Annas' description of virtue as persisting and reliable (2011: 8-9) identified in Chapter 1 Section 2 establishes that the virtuous individual must be capable of consistent virtuous behaviour. Throughout life individuals are likely to engage with multiple different contexts, each with their own unique moral requirements. Given the stipulation that virtue is consistent, this therefore requires the individual to also display virtue in these contexts and thus entails the necessity for a cross-contextual capacity for virtue.

Section 5.1.2 of this chapter will determine social disgust to be the disgust mechanism that produces virtuous disgust reactions, and Chapter 3 Section 4.2 determined that an individual's meaning structures — the mechanisms which govern social disgust's elicitation — develop based on unique experiences, which consequently entails the individual's capacity for virtuous social disgust is limited by contextual understanding. Given that appropriate emotional reaction is a necessary component of virtue, and the individual must be cross contextually virtuous, this requires the individual to possess the capacity for appropriate emotion cross contextually. However, the contextually limited development of social disgust shows this not to be possible, thus establishing a flaw in Naturalistic Virtue.

Whilst presenting a credible challenge to Naturalistic Virtue Theories, this issue shall not be discussed any further here as it is likely the established description of social disgust development could apply to other emotions[1], meaning they can also be seen to cause the same problem. In which case, the problem is not uniquely caused by disgust and can be better characterised as the problem of contextually developed emotion. This therefore seems like an as yet unidentified manifestation of the situationist critique of virtue ethics — challenging the assumption of the individual's capacity for cross situational virtue through the contextual development of emotions — an adequate discussion of which would require elaboration and exploration of the situationist debate and an exploration of the relationship

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[1]It could be taken that other emotions similarly regulate meaning structures — which have been determined to be contextually developed. For example, in line with the account of the function of anger presented in Chapter 2 Section 5.2, anger may be understood to regulate meaning structures that inform self-interest. Further work would have to be done to establish the feasibility of this view, however even if it transpires that meaning structures cannot account for emotional elicitation beyond disgust, it is still possible to demonstrate that emotional dispositions are contextually developed through anecdotal evidence. For example, a member of the emergency services may develop a different emotional disposition towards tragedy than a primary school teacher, given the emergency service workers likely proximity to, and experience of, tragedy.

between virtue and emotion without disgust as a focus. Because it is the intention of this thesis to discuss the unique implications disgust has for virtue, and this problem seems indicative of a larger disgust-unspecific issue, this problem will be identified as a worthwhile avenue of further investigation, but omitted from this thesis.

The following discussion will therefore focus on disgust's capacity to form and express appropriately virtuous disgust reactions and its capacity to inhibit appropriately virtuous behaviours, as these potential points of incompatibility examine disgust's unique interactions with virtue. To aid this discussion, this chapter will now recap Naturalistic Virtue Ethical description of the behaviour of virtuous emotion established in Chapter One and then elaborate Kelly's disgust theory.

3 Appropriately Virtuous Emotion

The connection between virtue and emotion is most clearly expressed in Slote's (2001) Agent-Based theory as he grounds virtuous behaviour in a caring motivation. Previous discussion[2] in Chapter 1 Section 3.1.2 determined that Slote's sentimentalist account sees motivations consisting of emotions that affect the individual strongly enough to compel them to action, so Slote's virtue ethics of caring grounds virtuous behaviour in actions that are triggered by an emotional reaction that displays a caring motivation[3]. This can also be taken to demonstrate that virtue requires situationally appropriate emotional reactions, as different situations will require different emotions to express a caring motivation, as demonstrated in footnote 3.

The other naturalistic theories also hold to this principle of appropriate emotional reactions[4], but justify it in a different way. Both the Qualified-Agent and Pluralistic Theory present accounts that display virtuous behaviour as naturally good for the individual, thus

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[2] Of Zagzebski's (1998) justification of why motivations can be used as the foundation for moral assessment.

[3] Although a caring motivation directs the individual's attention pro-socially towards others, it does not limit expressions of caring to strictly positive other oriented emotions. Acts motivated by negative emotions can display virtue provided they too express caring. For example, a parent's disappointment or anger at their child engaging in reckless behaviour can be understood to express caring provided it is manifested appropriately.

[4] Hursthouse was recognised as stating that virtues required "appropriate feeling(s) or attitude(s)" (1999: 125) in Chapter 1 Section 3.1.1, and Swanton was recognised as having stated that virtue requires "relevant fine feelings and emotion" (2003: 26) in Chapter 1 Section 3.1.3.

being inherently pleasurable or harmonious for the individual to perform. On these accounts, appropriate emotional experience during virtuous behaviour reflects the individual's understanding and commitment to the value virtuous activity, illustrating the virtue is an embedded character trait. It also demonstrates the individual is experiencing the natural benefits of virtuous action.

A further important consideration regarding virtuous emotional reactions is that alongside experiencing the appropriate emotions "on the *right* occasions, toward the *right* people or objects, for the *right* reasons" (Hursthouse, 1999: 108), Naturalistic Virtue Theories can be seen to stipulate the individual should also experience this emotion to the right degree. Once again, this is most clearly illustrated by Slote's theory. Chapter 1 Section 3.1.2 determined that, on Slote's account, a motivational emotion was one felt strongly enough to compel action. Given that emotional intensity can determine whether an action is compelled, this also implies that emotional intensity can determine what action is compelled. For example, the amount of compassion a charitable campaign elicits in an individual will determine their subsequent actions in support of the charity — they may be moved to donate, or affected so significantly they are compelled to help in other ways. This subsequently suggests the individual must experience the correct emotional intensity to compel appropriate action[5].

Chapter 1 Section 3.1.1 identified the necessity for an appropriately intense emotional experience is exhibited in Qualified Agent Theory in Hursthouse's stipulation that the individual acts 'for the right reasons' as appropriate emotional intensity can be taken to inform these appropriate reasons; and the necessity for appropriately intense emotional experience in Swanton's theory can be established through her stipulation that fine inner states must express "relevant fine feelings and emotions" (2003: 26) and in that she adopts an Aristotelian understanding of what this entails[6]. Her stipulation of *fine* emotions suggests theses must not be generic but situationally appropriate, and Aristotle's famous doctrine of

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[5]It can be observed here why Slote's theory is so valuable when it comes to assessing Naturalistic Virtue Theories' compatibility with disgust as this direct connection between emotion and virtue entails any incompatible feature of virtuous disgust will have a direct effect on Slotean virtue. However, from this, it also seems to make it most vulnerable as Slote directly grounds the individual's capacity for virtue in their capacity to experience appropriate emotion.
[6]This was established in the characterisation of Swanton's theory presented in Chapter 1 Section 3.1.3.

the mean establishes that virtue requires an appropriate response determined by relevant situational features (2009: 30). As emotion is a necessary part of virtue an overly emotional or under emotional reaction relative to the situation signifies an inappropriate reaction and therefore a lack of virtue, and since Swanton adopts this Aristotelian understanding, it can be assumed her theory also requires an appropriately intense emotional response.

Finally, it is necessary for later discussion to briefly determine that naturalistic virtue ethical moral judgements are made in a sociomoral context, again illustrated through Agent-Based theory's grounding virtuous motivation in caring motivation. Slote structures caring motivations as a balance between intimate caring (caring for friends and relatives), humanitarian caring (concern for others in general), and caring for ourselves (2001: 66-77). This conception of caring clearly illustrates that virtuous behaviour is other oriented, therefore operating in a social context. The principles on which Slote's idea of caring is established, empathy, altruism, and social cooperation, also illustrate that what constitutes a caring motivation is not relative but adheres to an external standard of goodness expressed through psychological principles. Therefore, virtuous behaviour is measured on a socially standardised account of morally good and bad behaviour.

4 Kelly's Unified Account of Disgust

This section will now formulate Kelly's (2011) account of disgust which will also be referred to as the unified account.

Kelly did not formulate his account with the intention of analysing its compatibility with Naturalistic Virtue Theories, nor does he directly engage with this project, however, his account shall be used in comparison to the Dual Mechanism Theory here for several reasons. First, it is formulated from a similar evolutionary perspective — which Chapter 2 Section 2 identified as the desired perspective from which to examine the psychological reality of Naturalistic Virtue Theories given their grounding virtue in evolved natural function. Second, it elaborates upon features of disgust necessary for compatibility examination — such as evolve function, behavioural profile, and an account of elicitor acquisition. Third, much of Kelly's account has already been presented and utilised in Chapters Two and Three as the Dual Mechanism Theory uses Kelly's account as a foundation for the physical disgust mechanism, so a level of familiarity has already been established,

and it will be interesting to examine how the developments in the literature integrated by the Dual Mechanism Theory change the response to the compatibility question. It therefore presents a theory that is appropriate for the examination of Naturalistic Virtue Theories, which possesses the necessary components to do so, and one that is ideal for comparison with the Dual Mechanism Theory given these established similarities and the fact the Dual Mechanism Theory draws a lot from the unified account.

Also, despite not engaging with disgust's relationship with virtue, Kelly has engaged in the normative debate concerning disgust's place in morality, and Chapter 1 Section 4 determined that he argued against disgust's place in morality on the basis that it causes dehumanisation and inappropriately interferes with moral judgements. Understood in virtue ethical terms, this argument can be taken to imply that disgust causes unvirtuous behaviour, and entails the conclusion that Naturalistic Virtue presents an inaccurate account of the psychology of disgust. Given that Kelly's normative criticisms of disgust were drawn from an examination of the features of disgust established by the theory that is to be presented here, this inferred implication about the naturalistic virtue ethical characterisation of disgust can be tested, and the strength of its challenge to Naturalistic Virtue can be compared to the Dual Mechanism Theory.

As much of Chapter Two and Three's recounting of Kelly's theory was fragmented and utilised in the construction of a different theory, for the sake of clarity and consistency in the coming discussion, a brief run-down of the entire theory shall now be presented, along with the identification of further relevant, yet unidentified features.

4.1 Characterisation of Kelly's Account

Kelly characterises disgust and an emotion (2011: 1), and as previously established, he claims it emerged as a poison and parasite avoidance mechanism, produced by the entanglement of said mechanisms (2011: 45). He argued evolutionary selection pressures led to both mechanisms operating on hair triggers with tendencies to produce false positives (2011: 47, 50) and that these features survived the entanglement, creating an overactive disgust reaction that frequently activates unnecessarily.

He also identified that the one-shot learning of poison entities, a phenomenon in which a single instance of exposure to a potentially poisonous entity is enough for an individual to

recruit it as an elicitor, endured through entanglement and emerged as a feature of disgust (2011: 23), as did contamination sensitivity towards parasitic entities (2011: 19). Kelly cites studies that show physical contact is not necessary for perceived contamination (2011: 19). Proximity, perceived contact, or a known history of prior closeness is enough to trigger contamination, at which point the contaminated entity is treated in kind with the disgusting source. Kelly also argues that contamination sensitivity is elicitor neutral (2011: 19): Anything that triggers disgust, regardless of what 'domain' it is in (i.e., social, or physical), has the potential to contaminate other things. He then credits disgust with engendering a sense of offensiveness (experienced towards the elicitor) that causes a severe reaction from the individual and attention and memory biases that lead to a disgusting entity remaining in the individual's cognition for longer than other entities (2011: 18).

Kelly also presents evidence that disgust negatively influences a person's assessment of situations, making judgements harsher when it occurs before, or during the judgement (2011: 24). His theory established disgust can negatively affect judgements when its elicitor is the object of the individual's evaluation - when an elicitor enters cognition as a part of a judgement[7] - and when disgust is experienced incidentally outside of a judgement[8] (2011: 25). Effectively, Kelly's unified account establishes that, provided the individual is still experiencing the cognitive effect of disgust whilst they are making a judgement, any instance of disgust can negatively influence a person's assessment of situations.

Whilst providing a comprehensive description of disgust's behaviour, Kelly's account does not describe some of the more fundamental cognitive behavioural characteristics of the emotion. His account has been used as the foundation for the physical disgust mechanism in the Dual Mechanism theory and the above characterisation is enough to demonstrate its compatibility with the cognitive characteristics attributed to the physical mechanism from a reinterpretation of the IFT[9]. The hair trigger and proclivity for false positives demonstrates contextual insensitivity, as they show disgust is easily triggered with no regard for relevant situational features to establish whether it has activated in the right context. These features

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[7] Like in Salerno's mock jury experiment presented in Chapter 3 Section 2.2, in which individuals had to make moral judgments whilst considering physically disgusting evidence.
[8] For example, if the individual is experiencing disgust towards a bad smell, or visual cues from the surrounding environment.
[9] In Chapter 3 Section 2.3.

also demonstrate that disgust is unreasoning as the individual's experience of the emotion is unresponsive to facts about whether the elicitor is in-fact a genuine disgust elicitor. The individual experiences disgust regardless, which is then maintained by the sense of offensiveness Kelly identifies it causes. Finally, memory biases indicate intention insensitivity as it does not matter how or why the disgust elicitor was produced, only that the entity or event was disgusting. Therefore, Kelly's account of disgust could be said to be unresponsive to reason, contextual information, and intention.

After characterising the behaviour of the emotion, Kelly theorised that gene-culture coevolution created evolutionary selection pressures for a mechanism that regulated social cohesion (2011:116-117). He argued certain features of disgust made it an ideal candidate to do so, so it was 'co-opted' (2011: 117) to enforce social norms (as formulated by Sripada and Stitch 2007) and enforce ethnic boundaries — physical indicators of cultural difference such as uniforms, tribal markings, hairstyles, and tattoos (2011: 123).

Once Kelly established this further social function of disgust, he considered evidence from Schaich Borg et. al. (2008) and Simpson et. Al. (2006) that disgust may be disunified, producing different characteristic reactions depending on which domain (physical poison and parasite avoidance or social cohesion regulation) it is activated in. He rejects this, stating: "the disgust system is not fragmented so much as it is a single, unified system that is redeployed multiple times, in multiple domains, and in combination with several other systems" (2011: 131), thus taking the view that the same characteristic disgust reaction expressed towards physical elicitors is the same one expressed towards social norm violations, which also implies every reaction also possess the same, newly attributed, cognitive characteristics.

Rejecting a disunified account leads Kelly to identify that disgust can produce cognitive by-products in certain reactions (2011: 132). For example, a disgust reaction can be triggered by the expressions of adherence to a different religious belief as this expresses adherence to different social norms. Kelly's unified disgust theory entails that this elicitor can produce a disgust reaction in its entirety, complete with nausea, aversion, and contamination sensitivity (2011: 133). In this context, disgust is reacting to a difference in social norms — attempting to motivate the individual into changing their beliefs to adhere to the dominant norms of the group. Nausea, aversion, and contamination sensitivity have specific functions

relevant to the aversion to poisonous or parasitic threats but not directly relevant for the enforcement of social norms. However, Kelly identifies they activate anyway, making them 'by-products'.

5 Compatibility Assessment

The chapter will now examine the compatibility between Naturalistic Virtue Theories and the two presented Theories of disgust. Discussion will address each identified potential point of incompatibility in turn[10] beginning with the capacity to produce virtue-appropriate disgust reactions, and then determining whether disgust can interfere with virtuous behaviour[11].

5.1 The Capacity for Appropriately Virtuous Disgust Reactions

Chapter 1 Section 4 determined that disgust functioned as an aesthetic moral reaction to displays of vice in Naturalistic Virtue Theories, and Section 3 of this chapter reviewed the Naturalistic Virtue Ethical characterisation of emotion which determined the behavioural characteristics necessary for appropriately virtuous emotional reactions. This established that virtuous emotion is situationally responsive — capable of activating on the *right* occasions, toward the *right* people or objects, for the *right* reasons, and is also capable of being experienced to the appropriate intensity.

This therefore sets the elicitation criteria, and behaviour profile for an appropriately virtuous disgust reaction. If either Kelly's unified account or the Dual Mechanism Theory were to present an account of the emotion of disgust that is incompatible with either of these conditions, then, in the eyes of that theory, Naturalistic Virtue Theories present a psychologically unrealistic account of disgust which could generate practical and metaethical problems outlined in Chapter 1 Section 3.4.

5.1.1 The Capacity for Appropriately Virtuous Disgust Within Kelly's Theory

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[10] Excluding the discussion of whether disgust is capable of producing a suite of sufficient reactions for the reasons stated in Section 2.

[11] This provides a comprehensive form of compatibility assessment as it examines disgust's behaviour both inside and outside virtuous judgments, and also facilitates the compatibility examination of both the social and physical disgust mechanisms.

It is first necessary to examine whether the unified account can form disgust reactions that fulfil the function described by Naturalistic Virtue Theories. Kelly identifies that disgust regulates social norms, and behaving in situations in a way that displays virtue, such as being honest, fair, and respectful, can be considered normative behaviours[12]. If an individual has internalised these norms of displaying virtuous behaviour, then any act that displays vice exhibits a violation of these norms and can trigger disgust to motivate norm adherence. As this demonstrates the unified account of disgust can activate towards any display of vice, it can be taken to successfully fulfil the function attributed to disgust by Naturalistic Virtue Theories.

However, analysis of the characteristics of disgust on Kelly's account establishes it is likely to produce virtue-inappropriate reactions when it is the necessary emotion for virtuous behaviour. Kelly determines disgust behaves the same way in every eliciting situation, so, the mechanism that responds to poison or parasitic threat, which is unresponsive to reason, contextual information, and intention, also responds to social norm violations that relate to virtuous principles. This implies that disgust does not have the capacity to interpret relevant situational information and respond with the appropriate intensity in these sociomoral situations. It instantly responds to the first factor of the violation it perceives as disgusting, forming a reaction based on its first impressions of the elicitor, and likely meaning it has not perceived other relevant situational reasons that may influence the strength of the reaction.

Kelly's description of disgust in Section 3 as possessing a hair trigger and being likely to produce a strong aversion reaction suggests it will be particularly prone to unvirtuous overreactions. The hair trigger demonstrates that disgust is easily activated, with the sensitivity to be triggered by minor transgressions that do not require a significant reaction. The subsequent identification that disgust is felt as a strong aversive reaction establishes the individual experiences disgust intensely in each instance of elicitation which will be

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[12] As a 'norm of virtuous behaviour' describes a tendency to act in a specific way across all situations, this may appear to differ somewhat from the concept of norms introduced in Chapter 3 Section 4.1 which described norms as socially established practises of behaviour in specific instances. A norm of virtuous behaviour can still be considered a norm however, as it constitutes a socially adhered to practice, one that is promoted and compelled by social groups.

inappropriate in such instances that only require low-level disgust as the appropriate virtuous response[13].

The effects caused by the by-products of disgust Kelly identifies could also lead to unvirtuous overreactions as they may further increase the individual's negative perception of the elicitor. The elicitor has caused them significant discomfort through the induced nausea, potential vomiting, and feeling of repulsion, which may negatively affect the individual attitude to the elicitor, once again increasing the severity of the judgement and increasing the overreaction. These by-products may also be perceived as unvirtuous overreactions in their own right, as a nauseous physical response may be considered inappropriate for a moral disgust reaction.

Therefore, despite being able to form disgust reactions that fulfil the function attributed to disgust by Naturalistic Virtue Ethical theories, by formulating disgust as a singular, unified emotion which responds to sociomoral norm violations in the same way it responds towards poison and parasite threats - exhibiting an unreasoned and contextually insensitive response - the unified account presents a picture of disgust that is incapable of consistently responding in the appropriate manner necessitated by Naturalistic Virtue Theories. It therefore demonstrates that Naturalistic Virtue Theories present a flawed account of the psychology of disgust.

5.1.2 The Capacity for Appropriately Virtuous Disgust Within the Dual Mechanism Theory

On the other hand, the Dual Mechanism Theory can provide an account of disgust that demonstrates Naturalistic Virtue Theories present a psychologically realistic account of virtuous disgust. Analysis will first determine which part of the Dual Mechanism Theory fulfils the Naturalistic Virtue Ethical function of disgust, and then explain how, through analysis of elicitor formation and emotional behaviour, this mechanism is compatible with Naturalistic Virtue Ethical account of appropriately virtuous emotion.

Chapters Two and Three established that the Dual Mechanism Theory characterised disgust as consisting of two separate mechanisms — the physical disgust reflex and the emotion of

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[13] It is worth also noting that overreactions caused by the hair trigger and strong aversive feeling disgust causes are not just limited to instances in which a low-level disgust reaction is required, they could potentially occur in most instances of sociomoral disgust experience.

social disgust. They identified that whilst these mechanisms have a similar overall purpose —facilitating aversion — they fulfil different functions, respond to different elicitors, behave in different ways, and operate in different contexts. Of the two mechanisms, social disgust can be identified as the only one to engage with the sociomoral domain and make moral judgments. The characterisation of the function of social disgust identified it regulated meaning structures regarding good character, and an understanding of morally good and bad character can constitute a significant portion of these[14]. For example, an individual's meaning structure may establish honesty as a valuable character trait, entailing social disgust will be elicited by displays of dishonesty. It can therefore be taken to communicate condemnation of vicious character traits, thus fulfilling the Naturalistic Virtue Ethical characterisation of the function of disgust.

On the other hand, the characterisation of the physical disgust mechanism established in Chapter 3 Section 2.2 identified that physical disgust does not moralise reactions, and its identified function — facilitating poison and parasite avoidance — fulfils a purely practical purpose, meaning it does not hold any moral content. Any interaction between physical disgust and moral judgements occurs as a result of the occurrence of a physical disgust elicitor as the object of evaluation in a moral judgement, during which the physical disgust mechanism operates purely to fulfil its poison and parasite aversion function, and any social communication of physical disgust serves only to make others aware of potential poison and parasite threats to better facilitate aversion of the elicitor. This therefore demonstrates that physical disgust is not responsible for the expression of sociomoral judgements, which entails that addressing the capacity for appropriately virtuous disgust reactions only requires establishing whether the social disgust system is compatible with a Naturalistic Virtue Ethical account of disgust.

The first step in establishing compatibility between virtuous disgust and social disgust is to determine whether social disgust is in fact capable of forming virtuous social disgust reactions. As stated previously, the Dual Mechanism Theory identified that social disgust

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[14] Further connection to sociomoral judgements is also illustrated by the fact that the Dual Mechanism Theories account of elicitor formation determined that the formation of disgust reactions is also influenced by social norms, and it was determined in the previous section that social norms often have moralised content. So, moralised social norms regarding character traits can also influence the formation of social disgust reactions.

regulates meaning structures concerning good character, and these meaning structures are informed by education, experience, and the coercive pressure of social norms. If development occurred in a context that promoted the value of virtuous behaviour, the individual's meaning structures concerning character would be constructed in line with the principles of virtue and their social disgust reactions would develop to protect this.

Furthermore, Chapter 3 Section 3 identified that social disgust reactions are malleable provided they are presented with strong compelling evidence. Given that social disgust enforces meaning, this implies it is the meaning structure that changes in response to this evidence, which subsequently demonstrates meaning structures are also malleable. This consequently entails that meaning structures — and the social disgust reaction that maintain them — which do not currently align with virtuous disgust can be developed and brought into line with virtue. Dual Mechanism social disgust therefore has the capacity to form virtuous social disgust reactions, which establishes compatibility with the Naturalistic Virtue Ethical function of disgust.

Behavioural compatibility between social disgust and the Naturalistic Virtue Ethical accounts of emotion can then be established, first, through the recognition that social disgust is reason responsive. Chapter 3 Section 3 determined that social disgust was capable of interpreting and responding to reasons for its activation. Given that the previous paragraph established that social disgust is capable of developing in line with virtuous principles and forming virtue-appropriate social disgust reactions, this then demonstrates the virtue-appropriate social disgust reaction it is also capable of responding to relevant environmental cues to activate appropriately in situations that Naturalistic Virtue Theories establish require a virtuous reaction.

The same section which identified that social disgust is reason responsive also identified that it is responsive to intentionality, which further demonstrates behavioural compatibility with the Naturalistic Virtue Ethical account of emotion as it demonstrates social disgust's capacity to respond with an appropriate emotional intensity. Intentionality responsivity was established using Giner-Sorolla and Chapman (2017) experiments which demonstrated that social disgust intensity varied depending on the transgressors desire to cause harm. Acting from an intention to cause harm warrants more moral disgust than acting from good or neutral intentions that accidentally produce a bad moral outcome, as intention

demonstrates the act was deliberate and the transgressor therefore possesses vicious character traits - acting from malicious and cruel intentions with the desire to see others suffer. Intentionality responsivity therefore demonstrates that the intensity of social disgust reactions can be modulated by relevant reasons, which consequently establishes it can produce the necessarily nuanced emotional response required by Naturalistic Virtue Theories.

Finally, Chapter 3 Section 3 also determined that social disgust can provide cognitively accessible reasons for its reactions, compatibility can be further evidenced from this as cognitively accessible reasoning for emotional response can be established as an important component in the generation of explicit reasoning for virtuous actions. Naturalistic Virtue Theories stipulate that virtuous individuals must be capable of articulating reasons for their virtuous actions as it demonstrates they have understood what is required for virtue in this situation, consequently exhibiting that they possess the necessary understanding of virtue and have acted intentionally virtuously[15]. The capacity to produce cognitively accessible reasons for social disgust reactions entails that the individual can explain why an act that elicits social disgust constitutes a moral violation, and therefore explain why it warrants a moral response, justifying their virtuous action[16]. If the individual were unable to explain why an act constituted a moral violation, they would be unable to subsequently justify why their virtuous behaviour was an appropriate reaction to it, meaning they have not truly

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[15]This was partially established by Hursthouse's third premise of virtuous action identified in Chapter 1 Section 3.1.1 which states "The agent acts for a reason and, moreover, for the right reasons(s)." (1999: 124). Whilst this does not explicitly establish the individual must be able to articulate reasons for their actions, it does necessitate the individual is aware of the reasons for their actions, which suggest the individual can articulate them when necessary. Elsewhere, Annas, who formulates a similar Eudaimonic Naturalistic Theory, explicitly establishes that virtue requires the individual to be capable of articulating reasons for virtue, as this exhibits understanding of virtue (2011:19-20).

[16] An ambiguity exists here in that the evidence from Russell and Giner-Sorolla (2011b) does not establish whether the emotional experience directly 'produces' cognitively accessible reasoning for a reaction, or whether the activation of disgust merely does not inhibit the individual capacity to reason about a situation. Intuitively, the latter option seems more plausible as it seems possible to generate reasons for why an act constitutes a moral violation without explicitly experiencing the emotion, so it appears as if reason generation occurs independently of emotional experience, but further research is necessary to determine for certain. For the sake of the current point however, all that matters is that this demonstrates that the experience of social disgust does not interfere with the individual's capacity to generate reasons why an act constitutes a moral violation, so they can justify their virtuous behaviour.

understood why virtue is necessary and have not acted intentionally virtuous, consequently entailing they cannot be judged to be fully virtuous.

Discussion has therefore demonstrated the Dual Mechanism Theory can formulate an account of moral disgust that aligns with the function Naturalistic Virtue Theories attribute to virtuous disgust, and possesses characteristics necessary for virtuous disgust — being capable of forming virtuous disgust reactions that can respond to appropriate moral reasons with appropriate emotional intensity, and which enables the identification of reasons for those reactions. Consequently, when taken with the understanding of disgust presented by the Dual Mechanism Theory, Naturalistic Virtue Theories present a plausible account of the psychology of virtuous disgust.

5.2 Disgust's Capacity to Interfere with Virtue

Both the presented evolutionary accounts of disgust identify that it fulfils functions beyond the moral judgement of character traits, for example the facilitation of poison and parasite aversion. Discussion in Section 4.1 of this chapter and Sections 2.1 and 2.2 of the previous chapter identified that in fulfilment of these further functions disgust had specific downstream effects on an individual's cognition and capacity for judgement. It is possible that these downstream effects may interfere with an individual's appropriate virtuous behaviour in situations that require a virtuous response, thus creating a problem of virtue interference. Or, if a disgust reaction has erroneously activated in a moral situation, this may again lead to an interference with the appropriate behaviour required by virtue in that instance. This section will now examine whether these further functions of disgust have the capacity to interfere with appropriately virtuous behaviour.

Before this analysis begins, it is important to recognise that the coincidental experience of disgust during moral judgements is sometimes inevitable. For example, certain moral rules directly relate to engagement with physically disgusting entities, and it is therefore likely the individual will experience physical disgust alongside a moral judgement at some point. It is also worth noting that in such instances there may also be cognitive emphasis on the disgust experience because of the strong affective experience of disgust, and the attention and memory biases attributed to it. From this, it is not enough to claim virtue interference based on coactivation alone, as the respective reactions may be occurring simultaneously with no

interaction and the individual may be experiencing physical disgust *alongside* an appropriately virtuous reaction. To prove an instance of virtue interference, analysis will have to identify that disgust has specifically affected the individual's moral judgement in the situation, as this evidences an inhibition of the individual's capacity to behave appropriately virtuously.

It may also be noted that the coming discussion lacks an explanation of how exactly disgust affects cognition to cause virtue interference, which leaves the problem somewhat unexplained. However, this coming discussion will be focused on determining whether the problem exists, and if it does, identifying precisely where it occurs and which judgments it interferes with[17]. The following chapter will then develop this further necessary understanding of virtue interference.

5.2.1 Disgust's Capacity to Interfere with Virtue on Kelly's Theory

Initial observations suggest Kelly's account of disgust can cause virtue interference. He claims that the same disgust mechanism that responds to moral disgust violations also responds to non-moral social norm violations and non-moral physical disgust elicitors. Therefore, on Kelly's account, all disgust reactions operate in the same context. As moral disgust operates in the same sociomoral context as all other virtue judgements, the connection between moral and non-moral disgust then suggests that non-moral disgust ends up operating in the same context as virtuous emotional reactions. From this it can be inferred that the experience of poison and parasite disgust during a moral situation that requires an appropriate emotional motivation for virtue can interfere with the individual's capacity to exhibit this necessary emotional reaction.

The capacity for disgust induced virtue interference on Kelly's account can then be observed through his identification of downstream effects in which the experience of disgust during a judgement makes that judgement harsher and more severe. Again, this was evidenced in Section 2.2 of the previous chapter and Section 4.1 of the current chapter, but to briefly recap, Kelly cited various experiments to evidence that disgust made judgments harsher and more severe when its elicitor occurred as the object of evaluation in a judgement, and when

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[17] Which in itself is important for discerning how exactly physical disgust interferes with the cognition of other judgments.

it occurred coincidentally during a judgement. Kelly cites evidence that such effects can also influence moral judgments (2011: 24-25), meaning disgust can affect the individual's capacity to respond appropriately in situations that require virtue, which demonstrates a clear capacity for virtue interference.

Features of the unified account of disgust can then be identified that suggest it has the capacity to cause significant amounts of virtue interference. First, Kelly's identification that disgust has the capacity to interfere with judgements both when it occurs incidentally alongside a judgement and when its elicitor occurs as the object of evaluation establishes that disgust will always cause virtue interference provided the individual is still experiencing it during the moral judgement. This implies a capacity for frequent and regular virtue interference, especially for individuals who exist in contexts in which there is an increased likelihood of physical disgust exposure[18].

This problem is then exacerbated by multiple behavioural characteristics Kelly attributes to the emotion which establish a capacity for frequent, unresolvable, and persistent interference with the individual's virtuous behaviour. Kelly's characterisation of disgust as unresponsive to reason, context, and intentionality implies that the individual has no control over the occurrence of disgust, nor do they have any control over it once it is activated as they cannot overcome it with mitigating reasons. This consequently implies individuals have no capacity to stop disgust's effect on virtue if it coincides with a moral judgement.

The strong sense of offensiveness and memory biases Kelly attributes to disgust also establishes the elicitor and subsequent disgust reaction remain in the individual's cognition for longer periods of time than other reactions. This pronounced and enduring cognition of disgust increases its capacity to interfere with virtue as it suggests the enduring reaction could interfere with multiple instances of virtue, if for example a situation demands multiple consecutive moral judgments.

Furthermore, the model of contamination sensitivity Kelly establishes portrays a disgust reaction that is acutely aware of contamination potential, in which merely perceived contact

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[18] For example, doctors, care givers, bin men, and coroners will likely experience significantly more disgust throughout their life, which may mean they may experience more virtue interference than those in other contexts who are less exposed to disgust.

is enough to trigger contamination which leads to the tainted entity being considered equally disgusting. This potent contamination sensitivity may lead to frequent instances of contamination perception and disgust re-activation, increasing the chances of virtue interference. This would be especially troublesome in instances in which the disgust elicitor occurs as the object of the individual's evaluation as they may have to physically engage with the disgust elicitor for an extended period, it may contaminate other entities whilst in the individual's cognition, triggering further disgust and further interference with virtue.

Kelly's picture of contamination sensitivity also alludes to his recognition that disgust has a capacity for false positive activation, as contamination may frequently occur towards entities that do not warrant a genuine disgust reaction. This also reflects Kelly's characterisation of the emotion as operating on a hair trigger, exhibiting a mechanism with a low and indiscriminate activation threshold. These characteristics once again suggest a capacity for frequent virtue interference as they demonstrate disgust is easily activated, meaning more potential instances of virtue interference, and entities do not even need to present a genuine poison or parasite threat to trigger this easy activation.

Virtue interference can occur from disgust triggered by all identified elicitors on Kelly's account. Despite most obviously occurring as a result of poison and parasite-based disgust elicitation, Kelly's unified theory recognises disgust expressed towards sociomoral violations is similarly reason-unresponsive and contextually insensitive. Consequently, disgust may be triggered by some perceived sociomoral violation the mechanism identifies, but its contextual insensitivity and reason unresponsiveness fails to recognise factors that mitigate the necessity of its activation in a virtuous context. In these instances, disgust has been activated whilst a different emotion is required for the individual to display appropriate virtuous behaviour, and the unified account has already determined disgust has the capacity to override or affect the emotional motivation it co-occurs with[19]. Therefore, unnecessary sociomoral disgust reactions can also cause virtue interference.

Similarly, if disgust towards a non-moral conventional norm violation occurs at the same time the individual must act appropriately virtuously, contextual insensitivity, reason unresponsiveness, and overriding downstream effects entails disgust can again interfere

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[19] Through attention and memory biases.

with appropriately virtuous emotion in a moral judgement. This highlights yet more potential instances of virtue interference, and given the unified theory attributes such instances of disgust the same behavioural features this section identified exacerbate the problem, it stands to reason disgust from these sources present an equally significant capacity for virtue interference.

Overall, the initial identification that disgust can cause virtue interference is enough to establish that Kelly's unified account causes a problem for Naturalistic Virtue Theories as it demonstrates an inhibition of appropriately virtuous behaviour necessarily required by virtue. The elaboration of disgust's capacity for virtue interference throughout this section then demonstrates just how pervasive this issue is for Naturalistic Virtue Theories on Kelly's unified account of disgust - every instance of virtue-unrelated disgust experienced alongside a situation that requires virtue has the potential to cause virtue interference, the frequency of which is increased by behavioural features that exhibit the frequent, easy activation of disgust and establish that disgust is spread fairly easily which then facilitates further instances of virtue interference.

5.2.2 Disgust's Capacity to Interfere with Virtue on the Dual Mechanism Theory

On the other hand, the structure and content of the Dual Mechanism Theory initially suggests it may provide an account that does not interfere with virtue. It identifies that physical and social disgust are distinct mechanisms that operate in different domains, suggesting the operation of physical disgust does not interfere with the operation of virtuous emotion. It also identified that each mechanism developed unique behavioural features to fulfil their respective function, so the operation of disgust may be nuanced enough to activate appropriately in situations.

However, previous discussion in Chapter 3 Section 2.2 identified that, similarly to the unified theory, physical disgust negatively affects moral judgements in which it occurs as the object of evaluation, increasing the severity and harshness of the judgement. This was most clearly illustrated and evidenced in Salerno's experiments, which showed the presence of physical disgust eliciting gory photographs in an agent's judgement of an individual on trial for murder increased their negative evaluation of the individual and led to increased likelihood of conviction of that individual. As this establishes that experience of physical disgust

negatively affects moral judgements, it once again establishes a capacity to interfere with virtue as the presence of physical disgust will interfere with the individual's appropriately virtuous response in that situation.

Whilst it can therefore be established that this is also a problem for the Dual Mechanism Theory, features of the theory can be identified that demonstrate it presents a less pervasive instantiation of the problem. First, after accepting an updated meta-analysis of the experimental literature, the Dual Mechanism Theory recognises that physical disgust only interferes with virtue in instances in which its elicitor is the object of evaluation in a moral judgement. The virtue-reason responsivity of social disgust established in Section 5.2 also demonstrates that social disgust has the capacity to appropriately defer to other reactions in situations in which virtue requires a different emotional reaction, so the operation of moral or conventional social disgust does not threaten virtue interference. Dual Mechanism virtue interference can therefore only occur in one situation — when a physical disgust elicitor occurs as the object of an individual's evaluation in a moral judgement — which exhibits a significantly reduced capacity for virtue interference when compared to the unified account and subsequently suggests it will be a less pervasive issue for Naturalistic Virtue.

This reduced capacity for virtue interference in the Dual Mechanism Theory occurring from the reduction of instances of possible virtue interference also reduces the capacity for behavioural features of the emotion which exacerbate the problem. Similarities exist between Kelly's characterisation of the entire emotion and the Dual Mechanism characterisation of the physical disgust reflex as both recognise it is insensitive to reasoning and contextual information, it is experienced as a pronounced and offensive reaction, it is sensitive to contamination, and it has a hair trigger and is prone to false positives. The previous section's discussion of Kelly's account identified that these characteristics lead to an increase in the instances of virtue interference, and because the Dual Mechanism Theory characterises physical disgust in the same way, it stands to reason that some of these characteristics may also increase instances of virtue interference on the Dual Mechanism account.

However, because the Dual Mechanism Theory only recognises physical disgust virtue interference occurs when its elicitor is the object of evaluation, this negates virtue

interference induced by behavioural features that spread disgust beyond the object of the individual's evaluation. For example, whereas contamination from the object of evaluation onto another entity may have caused further disgust and further virtue interference on Kelly's account, provided contaminated entities do not then become the object of examination, the contamination from the object of examination onto other entities will cause no further virtue interference on the Dual Mechanism account. The object of examination is still susceptible to disgust contamination from outside sources, but the overall capacity for virtue interference has gone down.

Similarly, whilst physical disgust's pronounced and enduring effect on cognition might lead to prolonged virtue interference while it is the object of the individual's evaluation, the pronounced and enduring experiences of physical disgust the individual experiences towards elicitors that are outside of their direct attention (for example a disgusting environment) do not have the capacity to interfere with an individual's virtue, unlike on Kelly's account. Likewise, the fact that physical disgust operates on a hair trigger and is prone to false positives may increase the likelihood of physical disgust elicitors occurring as the object of evaluation. But again, all those reactions occurring because of disgust's hair trigger and proclivity for false positives that are outside of the individual's immediate cognition of the object of their evaluation will not affect their capacity for virtuous behaviour.

Overall, as physical disgust can affect the severity of judgements when its elicitor occurs as the object of evaluation in a moral judgement, the Dual Mechanism theory also generates a problem of virtue interference for Naturalistic Virtue Theories. However, the problem appears less pervasive than it was on the unified account.

6 Conclusion

This chapter aimed to establish the problems the Dual Mechanism Theory raises for Naturalistic Virtue Theories. It began by explaining that three points of potential incompatibility were identified after comparing the functions attributed to disgust by Naturalistic Virtue Theories and the Dual Mechanism Theory. These potential incompatibilities were: disgust may not be able to produce appropriately disgust reactions; the natural function of disgust may inhibit virtuous behaviour; and, if it were able to

produce appropriately virtuous disgust reactions, it might not be able to form the suite of reactions necessitated by Naturalistic Virtue Theories. The chapter then identified that the first two points of potential incompatibility would be addressed in this thesis because they presented lines of investigation that that were specifically concerned with the compatibility of features unique to disgust. However, the third point of potential incompatibility will not be addressed in this thesis as whilst an issue that expresses this incompatibility can be identified in the form of contextually developed disgust, it is likely a problem that is not unique to disgust.

The chapter then recapped features of Naturalistic Virtue Ethical account of virtuous emotion — specifically that virtue required a situationally appropriate emotional reaction experienced with the appropriate intensity — and then formulated Kelly's unified account of disgust to use as a comparative evolutionary account of the emotion.

The compatibility between disgust and Naturalistic Virtue Ethics was then examined by reviewing each identified disgust theory's response to each identified point of potential incompatibility, beginning with the examination of their capacity for appropriately virtuous disgust reactions, and then their capacity to interfere with virtue.

Kelly's account's capacity to express appropriately virtuous disgust reactions was considered first, and it was identified that his characterisation of the emotion was able to fulfil the function Naturalistic Virtue Theories attributed to disgust, but by describing disgust as contextually insensitive and reason-unresponsive in every instance of elicitation, this meant it was incapable of consistently exhibiting a virtue-appropriate reaction. The Dual Mechanism Theory was then examined, and it was identified that the social disgust mechanism could fulfil the function of disgust established by Naturalistic Virtue Theories, and this mechanism also possessed the behavioural characteristic attributed to emotion by Naturalistic Virtue Theories which facilitated appropriately virtuous disgust reactions. So, the Dual Mechanism Theory formulated an account of disgust that was compatible with the Naturalistic Virtue Ethical account virtuous disgust.

Kelly's accounts capacity to interfere with virtue was then examined and it was identified that a capacity for virtue interference was exhibited through Kelly's identification that disgust negatively affected judgements it occurred alongside of — making such judgements

harsher and more severe. Further examination revealed that the characterisation of the emotion Kelly provided led to this being a pervasive issue. The capacity for Dual Mechanism virtue interference was then considered and it was identified that physical disgust is also attributed the capacity to interfere with moral judgments when its elicitor occurs as the object of evaluation in moral judgement, so the problem is also present in the Dual Mechanism Theory. It was however explained that this presents a less pervasive problem for Naturalistic Virtue Theories, as virtue interference only occurring when a physical disgust elicitor is the object of evaluation significantly reduces the number of potential instances of virtue interference.

Discussion has therefore demonstrated that Section 4's elaboration of the implications that Kelly's normative argument has for Naturalistic Virtue Theories — that such theories present an inaccurate account of the psychology of disgust — are validated by both theories. Kelly's account has demonstrated that Naturalistic Virtue Theories present an inoperable account of virtuous disgust, and demonstrates disgust can frequently interfere with appropriately virtuous behaviour; and the Dual Mechanism Theory established that disgust has the capacity to interfere with appropriately virtuous behaviour when its elicitor occurs as the object of evaluation. From this, it can therefore be concluded that Naturalistic Virtue Ethics appears flawed, and the challenge these incompatibilities present for Naturalistic Virtue must be explored. However, it can also be seen that the challenge to Naturalistic Virtue Ethics is not as strong as it initially looked on Kelly's account, because the problems for virtue are less pervasive on the Dual Mechanism Theory and the previous two chapters have demonstrated that it provides a more up-to-date account of disgust.

The following chapter will now begin to expand the current understanding of the problem of virtue interference caused specifically by the Dual Mechanism Theory. Determining how precisely physical disgust affects cognition to cause this problem, and identifying further features of virtue interference and explaining how these expand the problem for Naturalistic Virtue Theories.

Chapter Five – Contouring the Problem - Extending the Effects of Motivation Interference

1 Introduction

Having established that, from the perspective of the Dual Mechanism Theory, physical disgust has the capacity to interfere with virtuous behaviour, this chapter will now examine how exactly physical disgust affects cognition to induce this interference. This will not only serve to clarify the nature of the problem posed for Naturalistic Virtue Theories, but it also facilitates the elucidation of further behavioural characteristics of physical disgust. The chapter will also contour the problem by identifying further features of the nature of physical disgust that extend the problems for Naturalistic Virtue Theories.

The examination of the mechanics of the problem will begin by identifying that it can manifest in two ways — either as a result of physical disgust fulfilling its poison and parasite aversive function, or as a result of it affecting the individual's capacity to make moral judgements. The chapter will then consider this understanding of disgust's effects on cognition in relation to Naturalistic Virtue Theory, determining that it affects appropriately virtuous reasoning and action and establish that it can be characterised as the problem of motivation interference.

This section analysing physical disgust's effects on virtue will conclude by establishing that physical disgust motivation interference can have different effects on virtue depending on how the moral behaviour is motivated. It will be identified that virtuous acts can be positively and negatively motivated, and because physical disgust negatively affects all judgements, when it is experienced during a positively motivated display of virtue it reduces the intensity of the individual's action, producing an unvirtuous underreaction, and when it is experienced during a negatively motivated display of virtue it the severity of their action, producing an unvirtuous overreaction.

Discussion will then identify that the intensity of physical disgust experience is influenced by a variety of factors that will be outlined and evidenced, and the chapter will conclude by identifying this this extends the problem as it demonstrates that the severity of motivation interference is determined by further morally irrelevant grounds, and by recapping the effect of motivation interference on cognition and virtue.

2 The Mechanics of Virtue Interference

Chapter 4 Section 5.2.2 identified that, when a physical disgust elicitor occurred as the object of evaluation in a moral judgement, it negatively affected the judgement making it harsher and more severe, thus creating the problem of virtue interference. This previous section did not elaborate on how physical disgust affected cognition to cause this virtue interference, which is important for understanding the mechanics of disgust, and how this causes problems for Naturalistic Virtue Theories. This current section will now explain the two types of virtue interference that can be caused by physical disgust, determine how these affect cognition, and then use this to refine understanding of how this affects virtue.

2.1 The Two Types of Virtue Interference

Evidence suggests physical disgust can affect behaviour during moral judgements as a result of the characteristic aversive physical disgust reaction occurring towards the elicitor present as the object of evaluation, and as a result of the disgust elicitor interfering with the individual's capacity to make moral judgements.

2.1.1 Virtue Interference Caused by Poison and Parasite Avoidance

Regarding the first instance of virtue interference, this can be understood as the physical disgust mechanism fulfilling its evolved function — employing the characteristic aversive behaviours as a response to a perceived poison or parasite threat of the elicitor occurring as the object of evaluation. It can be understood to possess and express all the characteristics attributed to a physical disgust reaction established in Chapter 3 Sections 2.1-2.3. Engendering an experience of revulsion and a desire to distance oneself from the elicitor, generating an experience of nausea, and a sense of offensiveness felt toward the elicitor, attention and memory biases toward the elicitor, being unresponsive to reason, context, and intentionality, and unable to provide cognitively elaborated reasons for its activation.

It may be contended that, because this behaviour occurs as a result of the physical disgust mechanism fulfilling its evolved function and is not directly engaging with the individual's moral judgement, it can be considered as occurring independently of the moral judgement and may therefore be considered an instance of disgust-moral judgement co-activation and

be dismissed as a genuine instance of virtue interference as established by the conditions outlined in Chapter 4 Section 5.2.

However, there remains something unsatisfying about this conclusion as it overlooks the fact that physical disgust produces a behaviour different to that which is required by virtue. Physical disgust towards the object of evaluation in a moral situation entails the individual will cognise the elicitor and automatically act to resolve their reaction, inhibiting the individual from acting appropriately in the immediate situation that may itself require virtuous behaviour. For example, virtue may require the individual to act sombre and respectful when visiting a morgue, however the physical disgust elicited by a corpse may lead someone who is not used to such sights to act inappropriately and disrespectfully whilst they resolve their physical disgust reaction. This form of virtue interference is therefore best understood to interfere with virtuous behaviour in the moment – when virtue requires the individual to act one way, but disgust makes them act another way.

2.1.2 Virtue Interference Caused by Physical Disgust Affecting Moral Judgements

Physical disgust can also cause virtue interference when it interferes with the individual's capacity to make moral judgments. Given the presence of a physical disgust elicitors as the object of evaluation in a moral situation, a physical disgust reaction will be present in the individual's cognition of the moral situation, and evidence demonstrates it can interfere with the individual's reasoning and action during a moral judgement[1].

This form of virtue interference has been previously evidenced in the discussion of Salerno's experiments in the examination of the cognitive characteristics of physical disgust in Chapter 3 Section 2.3. Whilst that section utilised Salerno's experiments to develop a picture of the cognitive characteristics of physical disgust by examining the characteristics of judgements influenced by varying intensities of physical disgust, Salerno is effectively measuring the effects of disgust on moral judgements when it occurs as the object of

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[1] This does not contradict the previous characterisation in Chapter 3 Section 2.2 that physical disgust does not moralise judgements, i.e. the presence of physical disgust in a judgement does not generate moral import in a situation that would otherwise not be viewed as moral. Instead, this claims that physical disgust affects the individual's capacity to make moral judgements when it is directed towards as the object of evaluation.

evaluation, so it can be utilised to explain the cognitive characteristics of this form of virtue interference.

Salerno constructed an experiment in which the only variable was the intensity of the disgust reaction towards an elicitor that was present as the object of evaluation and demonstrated the outcome of moral judgements changed with the intensity of disgust experienced, clearly evidencing the existence of virtue interference. Her experiments revealed three features of virtue interference, first, the crucial point that the intensity of the physical disgust reaction determined its capacity to interfere with moral judgements, with intense physical disgust reactions having a greater effect on judgements than weak physical disgust. Second, that physical disgust affects an individual's capacity to reason and act when it interferes with moral judgements, and third that the intensity of reason and action interference is again determined by the intensity of physical disgust experienced to the elicitor occurring as the object of evaluation.

Physical disgust's capacity to interfere with reason and action is most clearly demonstrated by the conditions that produced the most intense instance of judgement interference. Evidence demonstrated that physical disgust interfered with the individual's reasoning when making their judgement as it inhibited the individual from being able to respond to both strong and weak defence evidence, and affected their actions as it increased the likelihood of the individual convicting the defendant (2018: 344). The intensity of interference with reason and action being determined by the intensity of physical disgust was then demonstrated by the fact that the level of reason and action interference in other instances of judgement interference directly correlated with the intensity of the physical disgust reaction present[2]. For example, intermediate disgust experience produced reason interference and unresponsiveness to mitigating factors, but triggered fewer instances of condemnation — demonstrating it was *less* likely to affect the individual's capacity to act. Whereas low level disgust experience neither obstructed responsiveness to mitigating factors (it did not affect the individual's capacity to reason), nor produced condemnation (it did not affect the individual's capacity to act) (2018: 344).

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[2] Again, because physical disgust intensity was the only variable, it can be ascribed as the cause of this effect.

Whilst Salerno's experiments demonstrate physical disgust affected the individual's capacity to respond to other reasons, it did not measure whether physical disgust explicitly affected the reasons from which they acted, and whilst an increased likelihood of conviction suggests that it did, this cannot be definitively proven from the content of Salerno's experiments. Elsewhere however, a physical disgust elicitor occurred as the object of evaluation in Björklund et al.'s experiment in which they asked participants to morally judge consensual incest. Results found that individuals appealed to the physically disgusting nature of the act to justify their condemnation of it, even when their attention was drawn to the fact that "no harm was done, and that the fact that an act is disgusting does not make it wrong" (2000: 7). Therefore demonstrating that physical disgust also affects the reasons from which individuals act. A reasonable explanation for this occurring may be that the strong negative affective experience engendered by physical disgust, present in cognition and directed at the object of evaluation, provides a suitable negative feeling within which to ground disapproval, especially considering any other justification for negative judgement are clouded by physical disgust inhibiting access to other reasons.

Salerno concluded her work by stating that "gruesome photographs increase guilty verdicts by increasing negative emotion" and she reached this conclusion by observing that gruesome photographs increased levels of self-reported disgust, which correlated with a subsequent increase in guilty verdicts (2017: 345). Given that this thesis has broken down Salerno's experiment to demonstrate it is the reflex of physical disgust that is responsible for this effect on guilty verdicts, and an ambiguity in the wording of the experiment means it's possible that individuals are self-reporting physical disgust rather than emotion moral social disgust (2017: 340). A more accurate conclusion then would be to establish 'gruesome photographs increase guilty verdicts through the presence of a physical disgust elicitor as the object of evaluation', and given the focus of her experiment, this may in fact have been Salerno's intention with this conclusion.

It may be possible that the presence of physical disgust in cognition of the violation also effects a change in emotion as the negative affective experience engendered by physical disgust during the judgement may be taken as a reason to enhance the individual's negative

emotional social disgust reaction[3], thus validating Salerno's claim. However, this was not accurately tested for in Salerno's experiment, as she has tested for physical disgust's effects on judgements rather than emotion. Neither is it in any other experiment evidencing physical disgust's effect on cognition, and given the reason-obscuring nature of disgust effect on cognition, it may be difficult to test for. However, given that Chapter 3 Section 3 characterised social disgust as responsive to reason, context, and intentionality, and the presence of physical disgust is a contextual factor, it seems possible that this could be the case. Whilst seemingly likely, further study is required to validate this claim, and this leaves the question of physical disgust's effect on emotion unanswered.

2.1.3 Variation in Virtue Interference Caused by Poison and Parasite Aversion

Finally, it is worth identifying a further feature of virtue interference caused by physical disgust fulfilling its poison and parasite aversion function that can be drawn out from the previous discussion of physical disgust's effect on moral judgement. It was identified that the intensity of disgust experienced towards the elicitor occurring as the object of evaluation directly determined the amount of virtue interference the individual experienced when making a moral judgement. Given that the manifestation of the aversive characteristics of physical disgust is also determined by the intensity of the disgust reaction[4], the same can be said of the previously identified form of virtue interference insofar as the level of behavioural interference the individual experiences as a result of physical disgust fulfilling its evolved function is directly determined by the intensity of that physical disgust reaction.

For example, the individual may experience a minor physical disgust reaction towards the elicitor occurring as the object of evaluation from which minor behavioural interference will occur – the individual may be prone to avoidance of the elicitor, move less around the elicitor (to avoid contamination) and be keen to spend as little time as possible with the elicitor[5]. Whereas a more intense physical disgust reaction towards the elicitor occurring as the object of evaluation will result in more significant behavioural interference — the

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[3] It is likely the individual would experience social disgust toward the moral violation in this situation, as murder displays character traits the individual would morally disapprove of.

[4] For example, a mild disgust reaction might induce some revulsion and desire for distance, whereas a strong disgust reaction might induce nausea, retching, and a desire to cleanse oneself.

[5] Behavioural characteristics outlined by Park et al.'s experiments in Chapter 3 Section 2.3.

individual experiences a strong aversive feeling and thus has a significant desire for distance from the elicitor, they may also experience nausea and reason inhibition when resolving the elicitor. The experience of a severe enough physical disgust reaction may result in a complete inhibition of the individual's capacity to engage with the situation, morally or otherwise.

2.2 Physical Disgust's Effect on Naturalistic Virtue

Now that physical disgust's effects on cognition during judgement interference have been established, it is possible to refine our understanding of how exactly virtuous behaviour is affected.

This is best established using Hursthouse's premises for virtuous action, and to recap, these are:

> (1) […] it is to do a certain sort of action […] 'A virtuous, good, action' […] such as helping someone, facing danger, telling the truth, repaying a debt, denying oneself some physical pleasure, etc.
>
> (2) The agent must know what she is doing.
>
> (3) The agent acts for a reason and, moreover, for the right reasons(s).
>
> (4) The agent has the appropriate feeling(s) or attitude(s) when she acts.
>
> (1999: 123-125)

Regarding the first form of virtue interference - physical disgust interfering with virtuous behaviour in fulfilment of its poison and parasite aversive function – the extent of its interference with virtuous behaviour depends on the intensity with which it is experienced. For example, an intense physical disgust reaction can be seen to completely inhibit the individual's capacity for virtuous behaviour as it will completely divert the individual's cognition and behaviour away from the necessary virtuous behaviour in service of poison and parasite avoidance. The agent begins by experiencing virtue-inappropriate feelings as the affective experience of physical disgust (nausea and revulsion) overrides their cognition, instead of experiencing the appropriate emotional response to a moral situation. This then motivates virtue-inappropriate acts for virtue-inappropriate reasons as the individual is exhibiting aversion to the elicitor motivated by a desire to avoid contamination rather than

an action produced by due consideration of contextually appropriate reasons. This therefore inhibits the appropriate expression of premises 1, 3, and 4, and given that physical disgust is also characterised as being unable to provide cognitively elaborated reasons for its activation, it is also possible to argue that the agent does not know what they are doing, thus also violating premise 2. However, at this point, given that the agent is already performing the wrong acts for the wrong reasons, it does not seem important that the agent also does not know what they are doing[6].

A medium intensity physical disgust reaction may still inhibit the individual's capacity to experience the appropriate feelings — through engendered feelings of revulsion — and inhibit their capacity to understand the reasons for their actions — because it blocks the individual's capacity to access cognitively elaborated reasons for reaction — but they may be able to overcome their revulsion to perform the appropriate action. Whereas a low intensity disgust reaction might simply override the individual's capacity to experience the appropriate feelings, whilst leaving their capacity to reason, act, and know why they have acted intact. It is worth noting here however that because physical disgust has interfered with the appropriate display of virtue in some way in each of these instances — be it through feeling, reason, or action interference — none of them can be judged as appropriately virtuous behaviours.

Regarding the second form of virtue interference – physical disgust interfering with moral judgements - discussion identified that when physical disgust occurs as the object of evaluation in a moral judgement it interferes with the individual's reasoning and action in that situation, this immediately establishes disruption to premises 1 and 3.

Exactly how physical disgust interferes with reason and action shall be discussed shortly, but first a useful distinction can be drawn here between the two types of virtue interference to

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[6] It may be observed that in such instances of severe physical disgust virtue interference, as the elicitor will re-enter cognition when the individual perceives it as the object of evaluation when they come to make a moral judgement, the aversive behaviours will re-manifest, which may appear to make moral judgments impossible. Whilst it may be true the aversive behaviours re-manifest, the coming Section 3.1 will determine that sensitivity to an elicitor decreases with exposure to that elicitor. So, the following instance of virtue interference will not be as severe as the physical disgust reaction will not be severe. How long it takes for the individual to be able to morally engage with the situation may depend on the severity of the disgust reaction, however.

differentiate the two, and clarify how this latter form affects virtue. First, virtue interference caused by physical disgust fulfilling its poison and parasite aversion function can be seen to inhibit the display of appropriate virtuous behaviour because it motivates an entirely different action. Whereas virtue interference from physical disgust affecting moral judgements inhibits appropriate virtuous behaviour because it influences moral cognition and produces an inappropriate moral judgement. Therefore, the former can be seen to directly inhibit the exhibition of any virtue, whereas the latter interferes with an attempted expression of virtue. Virtue interference from the latter may often produce an act that somewhat resembles virtuous behaviour, especially when physical disgust is occurring as the object of evaluation in a negative judgement. However, the negative influence of disgust on cognition will produce a virtue inappropriate act from virtue inappropriate reasoning.

Regarding physical disgust's capacity to interfere with virtuous reasoning, Chapter 4 Section 5.1.2 determined that a physical disgust reaction held no moral content, it served purely to resolve a poison or parasite threat, so, to recognise it as a reason for negative judgement and allow it to motivate condemnation constitutes virtue-inappropriate reasoning for action. This may produce a judgement that resembles the appropriate outcome, but the individual has reached this conclusion for the wrong reasons. For example, it is possible that there could be a real-world manifestation of the conditions established by Salerno's experiments in her mock trial, within which it may transpire that the individual is indeed guilty, so condemnation is the appropriate course of action. If condemnation is motivated by the influence of physical disgust on reason and not due consideration of the available evidence, this constitutes an act from unvirtuous reasoning as the individual has not displayed the virtue of justice by carefully considering the facts, they have condemned the defendant for morally arbitrary reasons.

Similarly, whilst an act produced under the influence of physical disgust may resemble the appropriate course of action, evidence from both Björklund and Salerno demonstrates that the presence of physical disgust makes the individual more disposed to negative actions. This can be explained by recognising that the negative affective experience of disgust makes judgements more severe, which makes the individual more likely to act. As it also demonstrates the presence of disgust makes the individual more disposed towards radical acts, for example condemnation regardless of evidence, it can also be understood to be

making acts more severe. Returning to the real-world manifestation of Salerno's mock trial, the virtue of justice requires the individual to carefully consider the evidence and make a proportionate judgement from the outcome of this consideration. Whilst the influence of physical disgust might lead to the appropriate course of action — condemnation — it is also a morally irrelevant influence that makes the individual's action more severe than it would otherwise have been, which entails the action is more severe than the virtue of justice requires, thus inhibiting them from performing appropriately virtuous action.

Once again, evidence demonstrates the extent of physical disgust's effect on moral judgements is determined by the intensity of the physical disgust reaction, with intense physical disgust reactions directly interfering with the reasons for action, and weaker physical disgust reactions not having such a severe effect on action or directly inhibiting the individual's capacity to reason.

Whilst physical disgust's capacity to inappropriately interfere with virtue is readily apparent in instances of intense virtue interference — producing an act the virtuous individual would not do from reason the virtuous individual would not act from — it is not so for instances of weak motivation as it *appears* as if they do not affect reason or action. However, it is worth examining these weaker instances of virtue interference to demonstrate that these also cause problems for virtue.

First, whilst the presence of a weak physical disgust elicitor as the object of evaluation in a moral judgement might not completely override the individual capacity to reason in a moral situation, it is still feasible physical disgust can influence judgements even to a minor degree[7]. As it has been established that physical disgust reactions possess no moral content and therefore do not represent appropriate reasons to motivate virtue, if it were to be found to be influencing judgments, albeit in a minor way, this can still be said to be causing a problem of virtue interference. Second, it has just been established that physical disgust does not have to directly produce the 'wrong' action to cause virtue interference, a weak instance of

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[7] The characterisation of physical disgust's effect on cognition — producing an intense reaction that has a lasting effect on the individual's memory —makes it seem likely physical disgust would still be present in the individual's cognition of the moral judgement, and have some form of effect, even if it were experienced to a lesser degree.

virtue interference could still exert a small influence the execution of an action, making it more or less severe[8], to produce virtue-inappropriate acts.

Finally, regarding physical disgust's capacity to interfere with premise 4 — the agent's capacity to experience appropriate feelings whilst making moral judgments — it seems likely that in instances of intense motivation physical disgust will affect this in a similar way as before, insofar as the affective experience of physical disgust overrides the individual's capacity to experience appropriate emotions. However, Section 2.1.2 established it was not yet possible to determine whether physical disgust affected the individual's emotional reaction during moral judgement and whilst the cognitive characteristics of social disgust suggested it might, it is not possible to rule out the possibility that the individual is experience the appropriate feelings "underneath" the affective experience of physical disgust. Also, it does not seem likely that the affective experience of physical disgust will be strong enough to interfere with appropriate feelings in weak instances of virtue interference, as perhaps individuals could experience appropriate feelings simultaneously to physical disgust.

From this discussion, the nature of the problem that disgust causes for Naturalistic Virtue Theories can now be characterised as one of motivation interference. In instances of virtue interference caused by poison and parasite avoidance this motivation interference manifests externally to virtue — the experience of physical disgust changes the individual's overall motivation from behaving virtuously to contamination avoidance. Whereas in instances of virtue interference caused by physical disgust affecting moral judgements this motivation interference manifests internally to virtue — the presence and affective experience of physical disgust interferes with the individual's appropriately virtuous reasoning and this affected reasoning motivates a different action. From now on, the problem will therefore be referred to as the problem of motivation interference.

2.3 The Effect of Physical Disgust on Virtuous Behaviour Varies According to the Type of Virtuous Act it Interferes With

Finally, it is worth recognising that physical disgust motivation interference's effect on the individual's ability to display virtue varies based on the type of moral judgement physical

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[8] A point that will be discussed in the following section.

disgust interferes with, specifically depending on whether it is interfering with a positive or negative moral judgement.

Before this explanation can be presented it is necessary to clarify that a positive moral judgement expresses a moral reaction from a positive motivation. For example, an individual may donate money to a homeless person after experiencing sympathy towards them, or express approval and admiration of one who has conducted extensive charity work. Whereas a negative moral judgement expresses a moral reaction from a negative motivation. From a Naturalistic Virtue Ethical perspective, these should be experienced when witnessing and reacting to unvirtuous acts. For example, when a parent is disappointed by a child's reckless behaviour, or when an agent is disgusted by an individual who has just stolen from the elderly[9].

The previous section's examination of physical disgust's effect on moral judgements identified it had an overall *negative* effect on reason and action — the aversive affective experience generated by physical disgust prompted a more negative evaluation of the situation and harsher action in response. If this were to interfere with a negative moral judgement, the resulting evaluation of the situation would be more negative than it otherwise would have been, thus exacerbating their response and leading to an unvirtuous overreaction. An example of this has already been presented in the previous Section 2.2 as it was identified that in the real-world example of Salerno's mock trial, the presence of a physical disgust elicitor as the object of evaluation would make the individual's action in response to the situation more severe than the virtue of justice requires, meaning they have performed an unvirtuous overreaction.

Alternatively, if physical disgust were to interfere with a positive moral judgement, its negative effect on the individual's evaluation of the situation would result in a less enthusiastic response to the situation than is required by virtue, thus producing an unvirtuous underreaction. For example, in the case of homeless donation, physical disgust experienced as the object of evaluation (perhaps elicited by dirt or uncleanliness

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[9] It is worth noting here that all the Naturalistic Theories discussed in this thesis accept that virtuous behaviour can be positively and negatively motivated. Therefore, the following description of physical disgust's effect on moral judgement applies to all referenced Naturalistic Theories.

accumulated on the homeless individual themself from extended periods living on the street) will negatively affect the individual's judgement and subsequent action. Whilst this may still result in the appropriate outcome — donation — the influence of physical disgust means that the benevolence displayed by the individual's act will not be at the level that is required by virtue, meaning the individual has performed an unvirtuous underreaction.

Despite not extending the problem as these overall effects on virtue originate from this initial issue of motivation interference, this section is valuable in contouring the problem as it recognises the effects of physical disgust motivation interference produces different forms of unvirtuous behaviour, better describing the effect physical disgust can have on moral behaviour.

3 Causes of Variations in Physical Disgust Reaction Intensity

This section will now identify and present evidence for various factors that influence the intensity of physical disgust reactions, and the conclusion will review the strength of this evidence to gauge the certainty of each factor's existence. The conclusion will also discuss the implications this poses for the problem of motivation interference, establishing that this demonstrates the amount of motivation interference caused by physical disgust is determined by morally arbitrary factors, and that the factors that determine physical disgust intensity lead to unique levels of physical disgust intensity in every reaction, meaning no two instances of motivation interference are the same.

Before beginning, it is worth noting that most studies cited will refer to 'individual disgust sensitivity'. Brady et al. explain individual disgust sensitivity "is the appraisal of disgust as an especially unpleasant or threatening event" (2013: 91). As this effectively measures how disgusted an individual will be by an elicitor, it can be appropriately used as a measure of the intensity of an individual disgust reaction.

3.1 Exposure

Many studies illustrate that exposure to a specific physical disgust elicitor over time reduces the individual's disgust sensitivity to that elicitor. Rozin (2008) found that after a few months dissecting cadavers, medical students' disgust sensitivity to touching cold bodies was significantly reduced. Olatunji et al. (2011) found that an individual's disgust sensitivity

towards spiders was significantly reduced after a single two-and-a-half-hour session of exposure-based therapy. Prokop and Fančovičová (2016) found that after being exposed to the disgusting entities produced by babies, mothers demonstrated lower pathogen disgust sensitivity than childless females. Oaten et al. (2009) cite an unpublished manuscript from Stevenson (2004) that showed in a survey of undergraduates who had cared for a sick friend, relative, or partner (by changing soiled bedding and dressing wounds) the carer's disgust sensitivity towards the elicitors related to the care they provided decreased. Oaten et. al. also cite a further unpublished study they conducted (Case, Stevenson and Oaten 2008) which found a strong negative correlation between an individual's disgust sensitivity and their exposure history to a range of disgust elicitors determined by a questionnaire (2009: 308). Fessler and Navarrete (2005) found that disgust sensitivity towards physical disgust elicitors related to death decreased in individuals with age; they also determined this effect to be consistent across different cultures (2005: 286). Curtis et. al. (2004) also found that, in a survey of over 40,000 people, physical disgust sensitivity decreased with age. Their experiments included a variety of disgust elicitors, so this decrease in sensitivity was also determined to be a general effect on overall disgust sensitivity[10].

Closer examination of this evidence reveals two important features of exposure based physical disgust sensitivity reduction. First, Rozin's (2008), Olatunji et al. (2011), and Stevenson's (2004) studies display exposure-based reduction functions in a targeted manner, with Physical disgust sensitivity only reducing toward the specific elicitor the individual is exposed to. In Rozin's experiments, this was reflected in disgust sensitivity towards cold bodies and death/body envelope violations, in Olatunji et al.'s this was reflected in disgust sensitivity to spiders, and in Stevenson's - disgust sensitivity to elicitors associated with caring for the sick.

Prokop and Fančovičová's determination that disgust sensitivity reduction applies to a mother's pathogen disgust sensitivity *as a whole* (2016: 67) appears to contradict this idea of targeted disgust sensitivity reduction. However, a reasonable explanation for this finding is that in caring for a child, a parent is exposed to a plethora of pathogenic disgust elicitors:

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[10] Further evidence for the decrease in disgust sensitivity with age is also presented by Druschel and Sherman (1999); Quigley, Sherman, and Sherman (1997), and Björklund and Hursti (2004).

faeces, vomit, urine, snot, blood, chewed food, and this range of elicitors changes as the child develops. Consequently, the parent is exposed to enough disgust elicitors that it is reflected in their overall physical disgust sensitivity.

Second, through the recognition that older people have reduced sensitivity to a variety of different physical disgust elicitors, Curtis et al.'s study suggests that target exposure reductions endure and accrue over time and reflect an overall reduction in physical disgust sensitivity. This makes intuitive sense given that as an individual develops, they are exposed to an increasing number of disgust elicitors, some of which they will have a repeated experience of. This may be exacerbated by social and environmental factors, for example the nature of someone's job may entail they are repeatedly exposed to a certain set of physical elicitors (waste collectors, carers, or surgeons for example are all exposed to specific sets of physical elicitors). The older an individual gets, and the more they are exposed to physical disgust elicitors that did not produce negative consequences for the individual, the more desensitised the individual becomes towards a multitude of elicitors. This may be seen as desensitisation, or it may be seen as a refinement of the poison and parasite mechanism reflecting a habituation to their specific environment.

As the evidence for this effect has been well replicated across a variety of different situations and elicitors, it can be confidently concluded that repeated exposure to disgust elicitors decreases sensitivity toward that specific elicitor, and that this has a permanent cumulative effect on physical disgust sensitivity.

3.2 Individual Bodily Awareness

Individual bodily awareness was briefly introduced in Chapter 3 Section 2.3 in the discussion of Salerno's experiments and physical disgust's cognitive characteristics; however, a more thorough account shall be presented here. Salerno's defines individual bodily awareness as a "trait-level individual difference variable that captures the extent to which an individual is chronically aware of the sensations of their body" (2017: 338). She recognises individual bodily awareness is measured using Porges' body perception questionnaire (2017:338), which includes awareness of direct and indirect physical disgust symptoms. She also acknowledges its legitimacy as a means of measuring individual bodily awareness by citing

previous research in which it has been used to accurately assess "participants' subjective perception of their own internal states as it relates to experiencing emotion" (2017: 338).

Previous discussion in Section 2.1.2 of this chapter and Section 2.3 of Chapter 3 identified that, in Salerno's experiments, the level of individual bodily awareness was a predictor of the individual's disgust reaction to the elicitors. In the first study she identified, when compared to black and white photos, colour photographs produced "enough disgust to be infused into verdicts and increase convictions [and] this effect was stronger among mock jurors who tend to be relatively more aware of their bodily sensations" (2017: 342). As Salerno maintained consistent experimental conditions and only varied the elicitor used in each test, a varied response to the same elicitor which correlates with bodily sensitivity indicates that bodily sensitivity is responsible for a change for individual physical disgust sensitivity.

Her second experiment replicated this finding, and provided further support for the idea that bodily awareness is a contributing factor to an individual's disgust sensitivity through the inclusion of participant's responsivity to defence evidence. She found that those with low bodily sensitivity were more responsive to defence evidence when presented with both colour and black and white disgusting photographs as evidence (2017: 345). As the previous Section 2.1.2 determined that the manifestation of physical disgust's behavioural characteristics during motivation interference depended on the intensity of the physical disgust reaction, and not experiencing any reason or context insensitivity was a sign of weak motivation interference. Then this suggests those with low bodily sensitivity experienced weak motivation interference, which meant they experienced a weak physical disgust reaction, again demonstrating a correlation between bodily sensitivity and disgust sensitivity.

Given that other experiments determined the individual bodily sensitivity scale accurately communicates an individual's internal state, it correlated with the level of disgust each individual felt towards a standardised disgust elicitor; and the behaviour of each individual whilst performing disgust influenced behaviour reflected the responsivity to internal states indicated by their self-reported level of bodily sensitivity. It is reasonable to assume this evidence shows that individual bodily sensitivity is a contributing factor to determining an individual's disgust sensitivity. Whilst the evidence Salerno provides for this effect is

compelling, and the effect was replicated over the two experiments she performed, its status as a factor that contributes to the determination of individual disgust sensitivity would benefit from further study in different contexts to solidify its existence as an established effect.

3.3 Health Anxiety

Health anxiety is characterised by Hedman et. al. (2015) as a "persistent and debilitating fear of somatic illness" (2016: 868)[11]. As it is connected to other disorders like hypochondria, Contamination-Based OCD, and other general anxiety disorders by Olatunji (2009), Brady et al. (2013), Goetz (2013), and Fan and Olatunji (2013) it may be claimed that health anxiety cannot be utilised as a mechanism from which to measure standard individual variations in disgust as it reflects pathological, counter normative, neurological behaviours.

However, in early work examining the relationship between health anxiety and disgust Olatunji (2009: 237) recognises the relationship exists in the form of a correlation, with low health anxiety correlating with low disgust sensitivity and propensity and high health anxiety correlating with high disgust sensitivity and propensity. Also, all the cited studies that will be analysed in this section utilise large non-clinical samples undergraduate populations of universities (Hedman et. al. is the only exception to this, but this does not matter as Hedman et. al.'s study shall not be examined any further). Given that the data expresses a correlation between health anxiety and disgust in large populations understood not to have any health-related anxiety disorders, this suggests that health anxiety can be experienced at varying levels before it is experienced significantly enough to be considered a neurological disorder[12]. So, variations in health anxiety can still be used as a factor that causes variation in disgust sensitivity in this context.

Olatunji's (2009) study presents the first piece of evidence connecting health anxiety to physical disgust, in which he asked participants to complete a survey self-reporting their

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[11] Although, the affective experience in anxiety is not limited to fear, it can also be experienced in the form of unease, concern, distress, or dread.

[12] This is not denying the possibility that there are instances of undiagnosed health anxiety in the sample population. It is instead recognising that on the lower end where health anxiety is mild enough to not cause any significant divergent neurological behaviour, a variation in physical disgust sensitivity can be observed as a result of variation in health anxiety.

individual disgust propensity and sensitivity, and their individual measure of health anxiety (2009: 233). An understanding of disgust sensitivity has already been established using Brady et al. in Section 3, but Brady et al. also explain disgust propensity "is defined as the tendency to experience disgust in response to a variety of stimuli" (2013: 91)[13]. Olatunji also speculated (2009: 231-232) disgust sensitivity and propensity may also be determined by contamination fear or negative affective experience, as these produce similar cognitive effects as health anxiety, so participants also completed two further surveys measuring affective experience and fear of contamination (2009: 233). Analysis of results showed that disgust propensity and sensitivity significantly predicted levels of health anxiety even after controlling for affective experience and contamination fear (2009: 237), suggesting disgust sensitivity and propensity is uniquely determined by health anxiety.

Olatunji also identified that the disgust scale used to measure individual disgust reactions[14] was designed to measure individual disgust sensitivity and propensity independent of any specific contexts (2009: 237). Therefore, the correlation between disgust sensitivity and health anxiety cannot be dismissed as content overlap between disgust elicitors and elicitors of health anxiety.

Finally, the survey Olatunji used measured health anxiety along three factors: illness likelihood, illness severity, and bodily vigilance (2009: 233). Olatunji determined, after controlling for negative affect and contamination fear, disgust sensitivity and propensity specifically relates to bodily awareness in health anxiety, but not illness likelihood or illness severity. This result corresponds with and may go some way in explaining the effect identified in Section 3.2 that higher individual bodily awareness leads to higher disgust sensitivity, as higher bodily awareness may occur partially as a result of health anxiety. However, more research would have to be done to prove this connection.

Brady et. al. (2013) set out to replicate and expand Olatunji's findings through a study in which they tested how disgust sensitivity and disgust propensity individually predict health anxiety. They again asked individuals to self-report disgust sensitivity, health anxiety,

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[13] The difference between disgust propensity and sensitivity can be explained by recognising that disgust propensity pertains to the likelihood the individual will experience physical disgust, and sensitivity pertains to the intensity of experienced disgust.
[14] Van Overveld et. al.'s Disgust Propensity and Sensitivity Scale-Revised (2006).

contamination fear, and affective experience. Regression analysis of the results replicated Olatunji's findings that the level of disgust significantly predicted the level of health anxiety after controlling for contamination fear and affective experience (2013: 96).

Further analysis from Brady et. al. determined that "when both propensity and sensitivity are included in the same analysis, the effect of propensity is no longer significant" (2013: 97). Health anxiety specifically relates to how intensely disgusting an individual finds something, not how easily they were disgusted by it. Suggesting that "the process most relevant to health anxiety is not the ease with which an individual reacts with disgust, but rather the interpretation of that experience as threatening or otherwise indicative of harm" (2013: 97). Although previous discussion identified disgust sensitivity can refer to both propensity and sensitivity, Brady et. al.'s determination that health anxiety relates specifically to disgust sensitivity is still relevant for the intended point of the section. It shows variation in health anxiety can lead to variation in the intensity of physical disgust the individual experiences, so the level of motivation interference can be determined by the level of individual health anxiety.

It is worth noting that Brady et. al. recognised anxiety sensitivity and disgust sensitivity are conceptually similar processes, so it is possible they are both involved in the experience of health anxiety (2013: 97). Consequently, during their experiment they also asked individuals to self-report general anxiety ratings and found that "disgust sensitivity was no longer a significant predictor of health anxiety after the inclusion of ASI-3 [anxiety sensitivity] total scores in the regression equation" (2013: 97). Thus raising the possibility that health anxiety is determined exclusively by generalised anxiety sensitivity and the correlation between health anxiety and physical disgust occurs purely as a consequence of conflation of anxiety and disgust because of the similarity in affective experience.

However, Brady et. al. themselves identify that confusion arises because of conceptual overlap between disgust sensitivity and anxiety sensitivity, in that they contain some similar physical symptoms that may be misinterpreted or conflated in self-reports (2013:97). Therefore, it is feasible the confusion could go both ways in that disgust was misidentified as anxiety, especially considering individuals were somewhat already primed to sense and report anxiety by having to self-report health anxiety. Furthermore, again due to conceptual overlap, Brady et. al. recognise the effects may not be mutually exclusive in causing health

anxiety as both "may lead to an assumption of poor health, and thus a perception of health threat" (2013: 97). Therefore, both disgust sensitivity and anxiety sensitivity may be connected to health anxiety. Finally, in aid of the justification that physical disgust is correlated with health anxiety, further work from Goetz et al. (2013), discussed shortly, extends the connection beyond self-reports to a correlation between health anxiety and physical disgust related aversive behaviours. Demonstrating that health anxiety correlates with disgust specific behaviours unrelated to anxiety behaviours and indicating health anxiety sensitivity has a unique relationship with disgust sensitivity in some capacity. When taken together, these three arguments provide sufficient reason to maintain a belief in a relationship between disgust sensitivity and health anxiety independently of (or alongside) general anxiety.

Goetz et. al. recognised these previous experiments were limited insofar as they rely on self-reports to establish a connection between health anxiety and disgust sensitivity, and endeavour to establish a connection using disgust behaviours. They began by getting participants to self-report depression, anxiety and stress levels, personal characteristics related to OCD, and levels of health anxiety (2013: 434-435). But then also got participants to engage in a behavioural avoidance task in which they were presented a shallow box full of dirt, dead crickets and dog hair and asked to rate their disgust out of 10 (2013: 435). They were then asked to complete various tasks such as 'touch the mixture through a sheet of tissue' or 'touch the mixture with your face' that gradually increased individual exposure to the disgusting mix, then presented them with questionnaires to gauge their aversion and disgust towards the activities. Results demonstrated that level of health anxiety predicted the level of disgust the individual experienced during the tasks and their likelihood of

engaging in avoidant behaviours, even after controlling for gender[15], negative affect, and contamination fear (2013: 441)[16].

Overall, evidence has been presented and sufficiently replicated in the discussed studies to justify the existence of a correlation between health anxiety and physical disgust sensitivity. The connection between which can be seen to make intuitive sense as health anxiety expresses concern and wariness towards entities or experiences that may cause or suggest negative health effects, and physical disgust regulates exposure towards potentially contaminating entities that have the potential to harm the individual's health. So, it makes sense that the more wary an individual is about their health, the more sensitive they are to physical disgust elicitors, as such entities can potentially threaten their health. There is therefore significant overlap between the two mechanisms, a point Brady et. al. (2013: 96) and Fan and Olatunji (2013: 457) recognised.

One shortfall in the presented literature is that whilst displaying a correlation, it does not determine a direction of cause insofar as whether an individual's disgust sensitivity levels determine their health anxiety levels, or whether their health anxiety levels determine their disgust sensitivity. This information would be crucial for the current section as it would enable clarification of whether the level of health anxiety caused variation in physical disgust, or whether it was a symptom of disgust sensitivity. Although, given the similarity of function just established, a third perspective might be that the two experiences are linked and a change in one causes a change in the other. However, no further research currently exists that directly addresses the topic, so this ambiguity remains. Despite lacking this information, the correlation between disgust sensitivity and health anxiety is still useful for this section in its current form as it demonstrates individual difference in physical disgust

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[15]Alongside Goetz et al., Fan and Olatunji also control for gender in order to measure health anxieties' effect on physical disgust sensitivity. As this demonstrates that gender produces an observable difference in physical disgust sensitivity, it provides supporting evidence for the existence of gender-based difference in physical disgust sensitivity identified in Section 3.6. It also demonstrates the simultaneous influence factors that affect physical disgust sensitivity can have as it can be observed here that both gender and health anxiety are determining individual physical disgust sensitivity.

[16] Goetz et. al.'s results were replicated by a similar study conducted by Fan and Olatunji (2013), in which they tested for similar self-report measures, but this time used a random behavioural avoidance task from a choice of three that increased in disgustingness (2013: 455). Results again showed health anxiety correlated with disgust sensitivity when controlling for gender, anxiety, and depression.

sensitivity exists along further (yet to be fully clarified) lines, and the correlation provides some indication of what these lines might be, and an indication of the individual's disgust sensitivity.

3.4 Cancer

Evidence also demonstrates that cancer diagnoses increase individual physical disgust sensitivity. In a comparison between those with cancer diagnosis and those without, Azlan et. al. (2016) found that disgust sensitivity was higher in those with a cancer diagnosis (2016: 29). Azlan et. al. provide a variety of possible explanations for why this may occur, first speculating that heightened disgust sensitivity may be explained by a physiological response to the heightened state of vulnerability triggered through immunosuppression (2016: 30). They also suggest that the implications of a cancer diagnosis increase individuals' health anxiety, which the previous section identified has been connected to an increase in physical disgust sensitivity (2016: 30). Finally, they also speculate that because cancer treatment itself is often a threatening procedure that can have physically disgusting symptoms "repeated exposure to these kinds of threats may lead to a conditioned response to find the experience of disgust as more aversive than cancer free controls" (2016: 30).

A key piece of evidence in determining which of these potential causes Azlan et al. identifies provides the best explanation for why cancer diagnoses increase physical disgust sensitivity is that Azlan et. al. recognised "a significant negative correlation was observed between time (years) since cancer diagnosis and DP [disgust propensity], yet this pattern was also apparent for DS [disgust sensitivity]" (2016: 29). If physiological change through immunosuppression were responsible for disgust sensitivity change, it does not seem likely the individual would experience a decrease in sensitivity so uniformly over time since diagnosis, as disgust sensitivity may depend upon where the individual is with their treatment. Also, whilst a conditioned negative response might account for the increase in physical disgust sensitivity Azlan initially observed, this does not seem to fit with the fact that physical disgust sensitivity then gradually decreases, as if disgust sensitivity were to be controlled by a conditioned negative response to treatment, this may suggest that disgust sensitivity would remain the same or continue to rise given the individual is likely to have

received more treatments which would increase their negative response[17]. Therefore, an increase in health anxiety might provide the best explanation for disgust sensitivity increase caused by cancer, and a reasonable interpretation may be that an individual's health anxiety initially increases with a cancer diagnosis given the implications of the diagnosis, thus also increasing their disgust sensitivity. As the individual spends more time living with cancer they may come to terms with the implications of the diagnosis, or they might receive some positive news about treatment that reduces their anxiety. Thus, reducing their health anxiety and subsequent disgust reaction.

Further research would have to be done on the relation between these speculative causes of cancer induced disgust sensitivity change and disgust sensitivity to know for sure. However, many theorists have already established a clear connection between cancer diagnosis and health anxiety increase (Grassi et. al. (2004), Stark et. al. (2004), Jones et. al. (2013), and Mehnert et. al. (2009)). This also provides further support for the previous point that health anxiety is instrumental in influencing physical disgust sensitivity, as it suggests a cancer diagnosis increases health anxiety, which subsequently increases physical disgust sensitivity. Deimling et. al. (2006) identify that long term cancer survivors still suffer from increased health anxiety that occurs from fear of the condition returning, but this does not necessarily mean the anxiety remains at the same level as when they first received the diagnosis. Further research would again have to be done here comparing anxiety levels at the point of diagnosis to when a patient is in remission, and the corresponding disgust sensitivities at each of these points to be certain of the correlation.

Regardless of this speculation as to why cancer causes variation in disgust sensitivity, Powell et al. (2016) and Azlan et al. (2017) provide further replication of Azlan et al.'s (2016) initial evidence that cancer diagnoses lead to an increase in disgust sensitivity, meaning there is sufficient replication to establish the effect's existence. It should also be noted that, because a cancer diagnosis produces its own effect on disgust sensitivity, be it through its effect on health anxiety or otherwise, it can be considered an independent factor that affects physical disgust sensitivity.

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[17] The idea that a conditioned negative response increases physical disgust sensitivity also conflicts with the principle of exposure-based physical disgust sensitivity reduction established in Section 3.1.

Finally, if a cancer diagnosis can induce a change in physical disgust sensitivity, it is possible other more common illnesses and diseases may also influence physical disgust sensitivity[18], which may result in more widespread physical disgust variation. For example, it may transpire that disgust sensitivity increases with the common cold given a change in health anxiety or immunocompetency, this would result in more regular variation in physical disgust sensitivity. This may prove a valuable avenue for further investigation of physical disgust sensitivity variation, and the examination of these other illnesses' effects on physical disgust sensitivity may also serve to clarify how exactly cancer affects disgust sensitivity.

3.5 Physiological Influences - Environmental Threat, Homeostatic Dysregulation, and Pregnancy

This section discusses changes to physical disgust sensitivity caused by physiological changes induced by external influences beyond disease. Changes induced by environmental threat, homeostatic dysregulation, and pregnancy will be directly evidenced and discussed here, but it is worth noting the existence of these effects also reveals a potentially lucrative area of further investigation into causes of disgust sensitivity change, in the form of other instances of physiological change that induce a change in physical disgust sensitivity. For example, an open wound may heighten the individual's contamination sensitivity and thus their physical disgust sensitivity.

First, evidence demonstrates that physical disgust sensitivity can rapidly change in instances of environmental threat and homeostatic dysregulation. Batres and Perrett (2020) compared samples of students who resided in a consistently comfortable environment to student cadets undergoing officer training in a harsh environment. They found students whose environment remained consistently unchallenging experienced no change in pathogen disgust sensitivity. Whereas cadets exposed to a harsh environment over a 10-day cycle experienced a drop in pathogen disgust sensitivity at the start of the cycle which remained at a constant low level throughout the cycle (2020: 381). Batres and Perrett speculated that: "Decreasing pathogen disgust in a harsher environment would be a way to increase survival since it would allow individuals to consume what is available when

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[18]This seems especially likely in those diseases or illnesses acquired through oral incorporation or parasitic infection, or potentially those that manifest physically disgusting symptoms like vomiting or diarrhoea.

resources are scarce." (2020: 381). This evidence could therefore be taken to suggest that the physical disgust mechanism is automatically responsive and rapidly malleable in the face of certain types of external stimuli, perhaps when some form of environmental threat is more immediately dangerous to the individual than poison or pathogen exposure.

Hoefling et. al. (2009) conducted a study to examine the effect hunger, or 'homeostatic dysregulation', had on disgust towards unpalatable foods. Participants were either well fed or deprived of food and then shown pictures of palatable and unpalatable disgusting foods. Experimenters measured participant's spontaneous physical disgust reactions through facial expressions and found those deprived of food reacted with less disgusted facial expressions to pictures of unpalatable disgusting foods, but still reacted with strong disgust reactions toward food-unrelated physical disgust inducing control stimuli (2009: 55). Hoefling et. al. took this as evidence that the "study demonstrates that disgust toward unpalatable food is modulated automatically even by moderate levels of food deprivation" (2009: 55). This study communicates a similar idea to Batres and Perrett's as it suggests when the individual is threatened with a more immediate danger than poison or parasite exposure (i.e., starvation) physical disgust sensitivity is automatically downregulated to be less sensitive[19].

Whilst other scholars such as Oaten et al. (2009: 308) have recognised that the operation of disgust can inhibit essential natural behaviours which may necessitates the downregulation of physical disgust in certain instances, no further studies exist replicating the presented evidence for disgust sensitivity manipulation via environmental threat and homeostatic dysregulation, neither are there any which identify further manifestations of either of these proposed effects. Further research would be useful to strengthen the evidence for each effect's existence, however for the present argument, it is enough to accept that evidence *suggests* that physical disgust is rapidly adjustable in these specific contexts without identifying the full extent of environmental and homeostatic disgust regulation.

Finally, Fessler et. al. (2005) identified that physical disgust sensitivity changes during pregnancy. Controlling for the potential influence of nausea (2005: 344), they compared the disgust sensitivity of women in their first trimester to the disgust sensitivity of women in

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[19] It is interesting to note that this downregulation of physical disgust sensitivity was elicitor specific - to meet the immediate need but still protect from other potential poisonous or parasitic threats.

later stages of pregnancy and found women in their first trimester experienced an increase in physical disgust sensitivity (2005: 350). They recognise that bodily immunocompetence changes during pregnancy, and the first trimester represents the period in which the cost of pathogen exposure is greatest to mother and child, with food-borne illnesses presenting a particular risk. They therefore speculate that physical disgust sensitivity changes as a response to this potential threat, which is supported by the fact that they identified it is specifically food related physical disgust sensitivity that changes (2005: 350).

Kaňková et. al. (2022) recently found an increase in physical disgust sensitivity correlated with a weaker immune system response in early pregnancy, and from which they speculate "Disgust may reflect and compensate for insufficient immune adaptation in early pregnancy" (2022: 237). So Kaňková et. al.'s research corroborates the claim that individual physical disgust sensitivity changes during pregnancy, but appears to refine Fessler et al.'s earlier work by identifying an increase in physical disgust sensitivity specifically correlated with women with a weaker immune system response in early pregnancy, so the effect might not be as ubiquitous as Fessler et al.'s study suggests. More work will therefore be required to refine the relationship between early pregnancy and disgust sensitivity. However, for the purposes of this section it is enough to identify that evidence demonstrates individual physical disgust sensitivity can change during early pregnancy, possibly in compensation for a weaker immune system.

3.6 Gender

Many studies identify that physical disgust sensitivity also varies depending on gender. Al-Shawaf et al. (2018) collate and review the empirical literature on this topic to identify how disgust sensitivity varies between genders, and speculate on what exactly causes variation. They establish that evidence suggests women generally possess higher physical disgust sensitivity and are thus prone to more intense physical disgust reactions than men (2018: 150).

To illustrate the robustness and replicability of this claim, they cite Lieberman et. al. (2007) who determine women experience more physical disgust when imagining incest; Curtis et. al. (2004) and Prokop & Fančovičová (2010) who identify women experience increased disgust towards images of insects, open sores, dirty clothing, faeces, and other sources of

contamination; and Haidt et. al. (1994) who identify women experience more disgust toward disgust inducing statements about animals, death, hygiene, food, and sex (2018: 150). Section 3.3 of this chapter has also identified gender differences in disgust sensitivity also exist when individuals are engaging with physical elicitors associated with health anxiety. This evidence demonstrates gender differences in disgust sensitivity can be observed across a wide range of elicitors, which is enough to suggest gender has a global effect on individual physical disgust sensitivity i.e. women are in general slightly more sensitive to *all* physical elicitors than men.

Al-Shawaf et al. also identify that this effect is reflected in a diverse range of assessment methods, with Haidt et al., (1994); Oaten et al., (2009); Porzig- Drummond, et al. (2009); and Rozin et al. (1999) identifying the difference in both self-report and behavioural data. Whilst Curtis et al. (2004); Haidt et al. (1994); and Tybur et al. (2009) determine the difference is exhibited in both trait-level and state-level responses to disgusting stimuli.

Whilst this provides sufficient evidence for the existence of gender-based variation in physical disgust sensitivity, the cause for this has yet to be established. Al-Shawaf et. al. speculate about the cause in the second half of their paper, introducing six different hypotheses that may explain the cause of the variation at the evolutionary level. These being the 'mothers matter more' hypothesis, the direct contagion hypothesis, the teaching and modelling hypothesis, the food preparation hypothesis, the male mating hypothesis, and the hunting and warfare hypothesis (2018: 153-155). Closer examination of each determines they are all compatible with the Dual Mechanism Theory, but given the constraints of this thesis, there is not space to elaborate and examine each cause here to determine the likelihood of each one. As Al-Shawaf et al. recognise these hypotheses are not mutually exclusive (2018: 155) and all could be attributed as the cause of variation, it is intuitively feasible this difference arises as a result of a mixture of both social and physiological determinants.

4 Conclusion

The chapter began by identifying that physical disgust can interfere with virtuous behaviour in two ways: In situations in which it occurs as the object of evaluation during a moral judgement, its overriding of cognition and behaviour in fulfilment of its poison and parasite

aversion can inhibit the display of virtuous behaviour sometimes necessary in such situations, and it can interfere with the individual's capacity to reason and act appropriately virtuously whilst making moral judgements. It was also established that the level of motivation interference experienced was determined by the intensity of the physical disgust reaction occurring as the object of evaluation.

In instances of virtue interference caused by physical disgust overriding behaviour to facilitate poison and parasite aversion, an intense physical disgust reaction has the capacity to completely override virtuous behaviour, interfering with virtue appropriate emotion, reason, action, and inhibiting the individual from knowing why they have acted. Progressively less intense physical disgust resulted in the manifestation of less virtue interference, with intermediate disgust inhibiting virtue-appropriate feelings, and reasoning, but potentially allowing for virtue-appropriate action, and low disgust inhibiting appropriate feelings, but allowing appropriate reasoning and action. However, it was noted that because physical disgust interfered with appropriately virtuous behaviour in some way in every one of these instances, none of them can be judged as instances of appropriately virtuous behaviour.

Regarding instances of physical disgust interfering with moral judgements, discussion identified that physical disgust interfered with the individual's capacity to reason and act appropriately virtuously in such situations. Again, the intensity of motivation interference depended on the intensity of the physical disgust reaction, but analysing this revealed even low levels of physical disgust could lead to reasoning and action that is inappropriate for virtue. This discussion ended with a review of this form of motivation interference's capacity to affect appropriately virtuous feelings. It was concluded that whilst it seemed likely physical disgust could affect the individual's emotional disposition during the moral judgement as a result of the negative affective experience it generates, it was not possible to rule out the fact an individual experiences the appropriate emotional response 'underneath' their physical disgust reaction. The chapter then explained how both manifestations of the problem can be understood to be problems of motivation interference.

The exploration of physical disgust's effect on virtue then concluded with the recognition that physical disgust's effect on virtuous behaviour varies depending on the type of virtuous

act it is interfering with. As it was established the influence of physical disgust negatively affects reason and action, this produces an unvirtuous overreaction when it is interfering with negative judgements, and unvirtuous underreaction when it interferes with positive judgments.

The second half of the chapter then identified that a variety of different factors that influence an individual's physical disgust sensitivity which subsequently determines the intensity of their physical disgust reactions. Exposure-based physical disgust sensitivity reduction possesses the strongest evidence, with sufficient replication and a clear causal relationship between amount of exposure and the individual's disgust sensitivity, it can therefore be determined to be a definite influence on individual physical disgust sensitivities. Other factors, like individual bodily awareness, environmental threat, homeostatic dysregulation, and physiological change during pregnancy display a clear causal link between the factor and disgust sensitivity but lack sufficient replication to confidently say they exist. Finally, some factors, like gender, health anxiety and cancer, are well evidenced and replicated but lack a definite explanation for the causal relationship between them and individual disgust sensitivity.

Accepting proposed influences on disgust sensitivity that are not sufficiently replicated, or that do not provide a clear causal link between the proposed influence and disgust sensitivity, as legitimate influences on individual physical disgust experience without further investigation can be called into question, as attempted replication may fail or it may be found that the correlation is a coincidence, and something else is responsible for the change in disgust sensitivity. However, it is still useful to identify such potential influences here, as the limited evidence enables the tentative acceptance of such influences as the cause of variation, which can operate as a placeholder until further research provides a more definite conclusion.

Regardless of the factors that remain in question, this section has clearly demonstrated that various factors can affect the intensity of physical disgust reaction. Closer inspection of any of these presented influences on disgust intensity reveal that they are arbitrary in relation to moral judgements. For example, the number of times the individual has been exposed to the physical disgust elicitor occurring as the object of evaluation in a moral judgement has no bearing on what the outcome of that moral judgement should be. However, as they have

been established to influence the intensity of the individual's physical disgust reaction, and Section 2.1.2 identified that the intensity of physical disgust motivation interference was determined by the intensity of the physical disgust reaction, this consequently demonstrates that the outcome of the moral reaction is determined by these morally arbitrary features, as they set the intensity of motivation interference. This therefore extends the problem, as it demonstrates the individual capacity to be virtuous is totally at the whim of morally irrelevant factors[20].

Further contours to the problem can also be identified, as reviewing this evidence demonstrates each individual develops highly unique disgust sensitivities. Working in tandem with the individual's unique contextual experience, genetic disposition, and luck (which determines which elicitors the individual ends up being exposed to), the factors identified in this section can all have independent influences on their disgust sensitivity that coalesce to produce a suite of physical disgust sensitivities unique to them. For example, some factors like exposure affect the individual's sensitivity to specific elicitors, but levels of exposure will be uniquely determined by the context in which the individual has lived, and other factors like health anxiety have a global effect on all physical disgust reactions, but these will be uniquely determined by other factors like individual disposition, genetics, and past experience. Furthermore, other factors like harsh environmental influence and hunger, have a situational influence on the individual, also producing contextually determined physical disgust motivation interference. All these independent influences can then stack to produce a highly individualised physical disgust reaction.

Consequently, the same elicitor can trigger drastically different physical disgust responses from individuals. For example, through their previous exposure to similar elicitors (i.e. blood, gore, and injury detail), crime scene investigators, A and E doctors, and first responders might experience less physical disgust toward the images used in Salerno's experiments compared to someone who has never been exposed to anything like this before. The same elicitor will therefore produce differing responses in individuals, which will

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[20] It is worth noting that this point applies to both identified instances of motivation interference, insofar as the level of motivation interference caused by physical disgust fulfilling its poison and parasite aversive function, and motivation interference caused by physical disgust interfering with moral judgement are determined by morally irrelevant factors.

then go on to induce different levels of motivation interference. Equally, two individuals of very similar backgrounds may experience dramatically different motivation interference because they have different bodily sensitivity, health anxieties, and are different genders.

The elaboration of all these points identified in this chapter now enable the following chapter to identify the exact nature of the problems disgust causes for Naturalistic Virtue Ethics.

Chapter Six – The Problem of Motivation interference

1 Introduction

We have seen that physical disgust can interfere with virtuous behaviour when its elicitor is the object of evaluation in a moral judgement in Chapter Four, and then explored how it affects cognition to establish that it causes a motivation interference problem for virtue in Chapter Five[1]. The current chapter will now refine the problem, identifying the precise issues Dual Mechanism motivation interference causes for Naturalistic Virtue Theories. It will establish that motivation interference presents both a practical and metaethical issue for Naturalistic Virtue Theories and analysis will reveal that whilst the practical problem is resolvable, the metaethical challenge presents a persistent problem for Naturalistic Virtue Theories.

The chapter will begin with an elaboration and exploration of the practical problem, it will identify that physical disgust motivation interference makes consistent virtuous behaviour impossible, thus making virtue practically unattainable. Analysis will determine that this problem can be resolved when a developmental approach to virtue is adopted. Julia Annas's (2011) developmental account of virtue will be formulated, and it will be explained that this solves the problem by recognising that a state of perfect virtue is naturally unattainable, but virtue is still possible provided the individual commits to constantly developing their capacity for virtue. Virtue becomes a 'threshold concept' and the individual can still be considered 'virtuous enough' if they display partial virtue but possess a willingness to improve and drive to aspire.

Analysis will then identify that physical disgust motivation interference also causes a deeper metaethical problem which will then be discussed. It will identify that by defining virtue as natural goodness, Naturalistic Virtue Theories need to present a psychologically realistic account of virtue. However, physical disgust motivation interference challenges the psychological reality of these accounts by showing that humans are incapable of the consistent virtue-appropriate reasoning and action necessitated by Naturalistic Virtue Theories.

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[1]Whilst also identifying further relevant features of motivation interference in this chapter.

The chapter will then identify that Naturalistic Virtue Theories can respond to this problem by accepting a limited developmental conception of virtue such as Annas', and an operable, naturalistically justifiable strategy of virtue development through motivation interference mitigation shall be developed using Swanton's virtue of perfectionism as a guide.

Whilst this appears to resolve the problem by establishing a naturalistically justified limited account of virtue, the chapter will then determine that further problems arise when Naturalistic Virtue Theories commit to a limited account of virtue in that this creates value and definitional problems for virtue and natural goodness. These problems will be formulated, and it will be established that the Naturalistic Virtue Theories currently presented in this thesis have no means of resolving them, meaning then metaethical problem endures.

2 The Practical Problem of Motivation Interference

Physical disgust motivation interference could be seen to make virtue practically unattainable as it inhibits the individual's capacity for consistent virtue. The following section will begin by briefly recapping motivation interference's effect on virtue, and then determine that motivation interference's inhibition of virtue applies to all currently identified Naturalistic Theories and not just Hursthouse's conception of virtue. After this it will explain why consistency is a necessary part of virtue and establish that motivation interference can occur frequently enough to be said to inhibit the consistent display of virtue to cause a problem.

Chapter Five Sections 2.1.1 and 2.1.2 identified that, when its elicitor occurred as the object of evaluation in moral situations, physical disgust can interfere with an individual's capacity to be virtuous in two ways. First, physical disgust has the capacity to inhibit any virtuous behaviour that might be required whilst the individual is resolving their disgust reaction. Second, physical disgust has the capacity to disrupt moral judgments, interfering with the individual's capacity to reason, and negatively affecting their action. Through an examination of Hursthouse's premises for virtuous action, Chapter Five Section 2.2 then determined these instances of motivation interference inhibit the individual's capacity for

virtue by violating premises 1 – 'the agent acts appropriately virtuously', and 3 – 'the agent acts for the right reasons' (1999: 123-125)[2].

Both these forms of motivation interference can also be seen to inhibit the expression of Slotean virtue as the experience of physical disgust could divert the individual's behaviour from the required expression of a caring motivation and the presence of physical disgust in moral judgments interferes with the expression of an appropriately caring acts from appropriately caring reasons (2001: 38). They can also be seen to inhibit Swantonian virtue as again, in an instance in which the individual is required to display virtue whilst also engaging with an elicitor, the experience of physical disgust can again divert the individual's behaviour away from instantiating Swanton's conception of virtue, and the presence of physical disgust in moral judgments inhibits the expression of fine inner states (2003: 26) through reason interference, and inhibits the excellent realisation of the target of virtue (2003: 29) through action interference[3].

This demonstrates that physical disgust has the capacity to inhibit virtuous behaviour in all formulated naturalistic theories, but does not yet establish the existence of a problem. A further requirement for the possession of virtue is consistency — Annas (2011: 8), Hursthouse (1999: 28), and Swanton (2003: 59) all recognise that the individual must consistently act virtuously across all situations to demonstrate it is an embedded and enduring feature of their character[4]. Consequently, for motivation interference to cause a

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[2] Discussion of physical disgust's effect on emotion is omitted here, as analysis determined the available research did not provide conclusive evidence as to physical disgust's effect on emotion.

[3] This can be observed in the previous example in Chapter 5 Section 2.2 of the real-world instantiation of Salerno's mock trial, as despite hitting the 'target' of virtue by condemning the defendant, the negative effect of disgust on action made the individual's response more severe than the virtuous individual's would otherwise have been, meaning it was not an *excellent* realisation of the target of virtue.

[4]Slote does not explicitly stipulate that virtue requires a consistent caring motivation, but it is possible to argue that consistency in caring is necessary for virtue because consistency exhibits the genuine possession of a caring motivation. For example, it does not seem that the person who is inconsistent or sporadic in their caring (without good reason) is genuinely caring as this displays a level of ambivalence from the individual — only caring when they feel like it. A truly caring individual would therefore consistently express a caring motivation, as they are genuinely committed to the value of the act. Furthermore, inconsistency in caring could manifest through favouritism — caring for some more than others to an inappropriate degree — which does not express the balance of concerns necessary for the appropriate expression of caring outlined in Chapter 1 Section 3.1.2. It therefore does not seem appropriate to acknowledge the individual who cares inconsistently as virtuous, and virtue can be grounded in consistent, appropriately balanced, caring.

practical problem for Naturalistic Virtue Theories it must be established that it can consistently inhibit virtue, as this demonstrates that motivation interference makes it impossible for the individual to display the character consistency necessary for virtue, and thus virtue is practically unattainable.

Physical disgust's ability to consistently interfere with the individual's virtuous behaviour can be drawn out through examination of knowable and unknowable instances of motivation interference[5]. Knowable instances refer to times in which an elicitor is an established antecedent part of the moral situation and the individual is aware that they will be engaging with this elicitor as part of a moral judgement. For example, an individual can know they must respond morally appropriately when dealing with corpses in a morgue, when attending an open-casket funeral, when dealing with a crime scene, when dealing with a patient with physically disgusting symptoms if they are a doctor, or when they are considering physically disgusting evidence in a sensitive court case. Unknowable instances refer to times in which an elicitor occurs in a moral situation either antecedently or coincidentally, but the individual could not definitely know there would be an elicitor present to cause motivation interference before they have entered the moral situation. For instance, an agent may have to respond morally to an individual who has coincidentally stepped in dog poo.

Regarding unknowable instances of motivation interference, their capacity to frequently interfere with virtuous behaviour depends on elicitors. Take the previous example of the individual that is subject to moral evaluation and steps in dog poo just before the moral judgement is made, this has a very specific set of activations conditions — requiring the subject of moral evaluation to acquire an elicitor precisely before a moral judgement is about to be made — which intuition suggests do not occur very frequently. However, take the possibility of unknowable motivation interference caused by the unexpected presence of phenotypic differences or morphological irregularities in the object of evaluation[6]. Given

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[5] The capacity for motivation interference to consistently inhibit virtue will be examined along these lines as knowable instances of motivation interference present interesting implications for the practical problem that will be discussed shortly, and the knowable/unknowable distinction also plays an important part in the discussion of metaethical problem, so it is valuable to introduce the concept here.

[6] Given that the actions and behaviours of others are the subject of moral judgement and others are the often the subject of moral behaviour (For example, virtue may require the individual treat the

153

that such categories cover a wide range of potential elicitors whose presence are commonplace in a multicultural society, it seems likely such a mode of motivation interference could have a prevalent part in the inhibition of virtue — frequently inhibiting virtue enough to induce the practical problem[7].

As reviewing unknowable instances of physical disgust motivation interference demonstrates physical disgust inhibits the consistent display of virtuous characteristics required by Naturalistic Virtue Theories for virtue, this is already enough to establish the existence of the problem. However, examining knowable instances of motivation interference establishes that the problem can also be drawn out in a different way. Such instances of motivation interference demonstrate that there exists an identifiable group of moral situations in which virtue is simply not possible. Therefore, to recognise the existence of motivation interference is to accept that in situations such as these, virtue is impossible. Regardless of the frequency with which these instances occur to inhibit virtue, this does not seem congruent with the claim that the individual can be consistently virtuous, which implies the individual can be virtuous across all situations, as these knowable instances of motivation interference can be put forward to prove this untrue. So, the capacity for motivation interference to consistently inhibit virtue can be drawn out in two different ways.

2.1 The 'Virtuous Enough' Response Using Annas's Developmental Account

Taken as a practical problem, the problem of motivation interference can be resolved by recognising that the individual need not be perfectly virtuous to be considered practically virtuous, they can display sufficient amounts of virtue that demonstrates they are 'virtuous enough'. A similar argument was employed in the discussion of Transcendental Virtue in Chapter 1 Section 3.2. As Transcendental Virtue established a lofty standard of goodness[8]

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elderly with respect and care.) provided the agent is engaging with the subject in-person, this entails that the subject's appearance will be part of the agent's cognition whilst they engage in moral behaviour. If the agent perceives the subject to possess phenotypic differences or morphological irregularities, this will enter the agent's cognition, and would then cause motivation interference.

[7] It is worth remembering that such entities do not have to pose a genuine poison and parasitic threat to elicit disgust given the existence of false positive disgust elicitation, and it is also worth noting that such elicitors may not trigger an intense physical disgust reaction, but Ch. 5 Section 2.2 identified the disgust intensity was irrelevant for the induction of the problem.

[8] For example, emulating the goodness of God or the form of the good.

that the individual cannot hope to fully manifest through their action, Transcendental Virtue Ethicists accept that the agent can be viewed as virtuous when they have performed actions that sufficiently approximate these ideals of goodness.

2.1.1 Annas' Development Account

A Naturalistic version of the virtuous enough argument is presented in Julia Annas's developmental account of virtue. To explain this, it will first be useful to present Annas's analogy between virtue and practical skill which she introduces by establishing that virtue and skill are similar in that, to be fully developed, they both contain the *need to learn* and require the *drive to aspire* (2011: 16).

Annas recognises that contextual development provides individuals with an initial underdeveloped understanding of virtue[9] (2011: 21), therefore, much like a skill, individuals *need to learn* virtue to develop adequate virtue. Because virtues are necessarily active character traits, she cites Aristotle who recognises both virtue and skill can only be developed through practical experience (2011: 16), which for the newly developing agent takes the form of observation of teachers and role models and imitation of their behaviour (2011: 17). Whilst this is a sufficient developmental strategy for a 'beginner' in virtue, Annas recognises that mere mimicry is insufficient to truly develop a virtue or a skill as "even simple building skills are not easy or effortless to learn; they involve more than copying a role model and then learning by repetition to do it routinely" (2011: 17).

The *drive to aspire* then motivates the individual to develop their understanding to fully realise said virtue or skill, which manifests "in the need the learner has to understand what she is doing if she is to learn properly" (2011: 17). Understanding the reasons for an action helps the learner understand why such an act displays virtue and why it is valuable to act in such a way, thus developing their capacity to apply virtue on their own and transpose it onto new situations. Annas also claims the developing individual needs to be able to articulate these reasons for their virtuous action to demonstrate their understanding of their virtuous motivation, and enable the transmission of knowledge to learners to develop their own skill (2011: 19). Finally, Annas recognises that, again similarly to skill, even when the individual has developed a virtue as far as it is possible for them to, the *drive to aspire*

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[9] Similarly to how contextual development may provide an individual with the beginnings of a skill.

requires they keep practising virtue in the manner described to keep the virtue sharp (2011: 18). So, the impetus for development can be observed throughout all stages of virtue acquisition and life.

Establishing this developmental conception of virtue leads Annas to recognise the difficulty in cultivating virtue. She states they are "complex and difficult concepts, and getting them right goes beyond what most of us can muster unaided" (2011: 37) and she also recognises the capacity to develop 'complete' cross-contextual virtue is limited by the contingent development of virtue produced by living in an embedded context (2011: 64). By 'embedded context' Annas is referring to the circumstance – or circumstances - an individual grew up in that informed their conception of virtue (2011: 21). As such, she takes the position that it is practically impossible for an individual to develop into a perfectly virtuous person as outlined by other naturalistic theories (2011: 65) and being 'fully virtuous' becomes an unattainable ideal to look up to and strive for, to improve our own capacity for virtuous behaviour (2011: 64).

From this, Annas maintains the capacity for virtuous behaviour by adopting a more fluid conception of virtue that recognises these fundamental developmental components. She defines virtue as a "disposition of our character that is constantly developing as it meets new challenges and enlarges the understanding it involves" (2011: 38). Provided the individual performs virtuous behaviours relevant to their skill level and possesses the developmental disposition relevant to their skill, they can be judged appropriately virtuous (2011: 65).

She again uses an analogy to skill to illustrate this point, stating; "Suppose I have mediocre skill in skating and playing the piano; I can still honestly say that I am a skater or a pianist, though quite aware that I will never achieve ideal mastery over those skills" (2011: 65). Extending this analogy to virtue, we can correctly identify an individual as virtuous provided we recognise their capacity for virtue reflects the aptitude they display. For example, we can recognise young children are virtuous if they emulate the appropriate virtuous action. They might not understand the reasons for action, and compared to an adult, this expression of virtue might be considerably lacking. But their action reflects an appropriate expression of virtue relative to their development. Similarly, whilst an adult might display a complete understanding of virtue in one context, their behaviour in a completely alien context might

display *some* virtuous principles, as they may be able to transpose some of their understanding virtuous behaviour to this new situation, but it also display some faults due to the lack of contextual development. Again however, the individual can be judged as sufficiently virtuous given the impossibility of perfect virtue.

This might still be perceived as problematic as it shows Annas's account of virtue does not adhere to the principles of fully virtuous behaviour established by other Naturalistic Virtue Theories presented in Chapter 1 of this thesis. However, Annas responds that "this would be troubling if we insisted on a rigorist approach, such that a person either is virtuous or is not virtuous at all" (2011: 65). She contends that such approaches are undesirable as the virtuous, not virtuous dichotomy fails to recognise different levels of immoral behaviour, such as that displayed by the mediocre non-virtuous person, the horrendously vicious person, or the person who has just started to develop virtue but still sometimes performs unvirtuous acts (2011: 65). Furthermore, given the development nature of virtue she outlines, she argues the rigorist approach does not reflect the way in which she perceives the psychological reality of virtue to be. She states "We do not go suddenly or in a simple move from being pre-virtuous to being virtuous … being able to stop, as though we had acquired a static condition. Virtue is not a once for all achievement" (2011: 38). So, given her developmental perspective and the recognised limitations of individual virtue, the classic idea of the truly virtuous person seems incompatible with Annas's account.

2.1.2 Applying Annas' Developmental Account to the Practical Problem of Motivation Interference

After establishing this developmental perspective, it is now possible to explain how it provides a means of accommodating physical disgust motivation interference into an account of practically attainable virtuous behaviour.

Annas's developmental account of virtue identified that naturally occurring phenomena such as the difficulties of virtue cultivation and development in an embedded context naturally limited the individual's capacity to achieve perfect virtue, but determined individuals could still be virtuous provided they possess a developmental drive. Given that motivation interference occurs as a consequence of physical disgust fulfilling its evolved poison and parasite aversion function, similarly to the natural limitations on virtue Annas

identified, this too can be identified as imposing natural limitations on the individual's capacity for virtue. As such, the presence of motivation interference can be accepted as a natural, unavoidable inhibition of virtue and the individual can be judged sufficiently virtuous provided they possess a developmental drive, thus resolving the problem by establishing a practically achievable account of virtue.

This resolution strategy will benefit from elaboration of a few key points. First, the only difference between knowable and unknowable instances of motivation interference is the individual's epistemic relationship with them, which has no bearing on the fact that both occurred as a result of physical disgust fulfilling its natural function. So, this resolution applies to both knowable and unknowable instances of motivation interference, meaning it covers all instances of motivation interference.

Second, given that Annas identified virtue development as a continuous process, one which even the individual who has maximised their capacity for virtue must engage in, it is important to emphasise that virtue is only practically achievable if the individual possesses the need to learn and drive to aspire and displays appropriate virtue relative to their development. Following this, this resolution of the practical problem would benefit from an elaboration of the developmental conditions that facilitate sufficient virtue in the face of motivation interference to establish what practically achievable virtuous enough behaviour looks like beyond simply stating 'the individual must possess the drive to aspire'. However, such an elaboration is also relevant for the metaethical problem, and would require a lengthy explanation of the virtue of perfectionism, so it will be provided later in Section 2.3.2.2.

As it has now been established that Naturalistic Virtue Theories can adequately resolve the practical problem of motivation interference by recognising the individual can be considered virtuous enough and adopting a developmental account, discussion shall now examine the metaethical problem of motivation interference.

3 The Metaethical Problem of Motivation Interference

Physical disgust's capacity to interfere with virtuous behaviour also presents a deeper metaethical challenge to Naturalistic Virtue Theories. This section shall begin by formulating the initial problem and will then suggest that this issue may be resolved by again recognising

motivation interference as a natural part of human functioning and accepting that natural goodness can be achieved through virtuous enough behaviour. The consequences of adopting this perspective will then be discussed in which it will be identified that for it to be possible to do so, Naturalists Virtue Ethics requires a developmental account of virtue. This in turn necessitates a naturalistically justifiable account of virtuous enough behaviour, which it will be determined can be established through consideration of the virtue of perfectionism. The following section will then consider perfectionism in relation to physical disgust motivation interference mitigation and identify that an operable strategy of motivation interference mitigation can be developed to establish a standard of virtuous enough behaviour.

However, the final section will conclude that despite this, justifying a limited account of virtue creates value and definitional problems for Virtue and the problem of circularity for Natural goodness, which entails Naturalistic Virtue Theories cannot commit to a limited account of virtue, meaning no solution is available and the metaethical problem endures.

3.1 The Initial Problem

As Natural Goodness describes the optimal natural state for individuals to be in, this entails it is a realistic and achievable state. Therefore, by defining virtue as natural goodness, this consequently entails Naturalistic Virtue Theories must present a psychologically realistic conception of virtue, a condition the Dual Mechanism Theory challenges through the existence of motivation interference.

The problem physical disgust motivation interference poses to this can be established in much the same way as the practical problem. Chapter 1 Section 3.1.1 established that Naturalistic Virtue Theories define virtue as consisting of appropriate emotion, reason, and action, and Section 2 of this chapter also established Naturalistic Virtue Theories require virtues be displayed consistently throughout the individual's life. This consequently presents an account of psychology in which humans are capable of consistent virtue-appropriate behaviour.

Chapter Five Sections 2.1.1 and 2.1.2 established that, when physical disgust occurs at the object of evaluation in a moral situation, in fulfilling its poison and parasite aversion function it has the capacity to interfere with virtue-appropriate reason and action in

instances that require an immediate virtuous response, and interfere with virtue-appropriate reasoning and action when the individual subsequently has to make a moral judgement. Section 2 of this chapter then built on these findings to identify that this problem was persistent across all formulated Naturalistic Theories, and also demonstrated that motivation interference can be seen to occur frequently enough to inhibit the consistent display of virtue necessitated by Naturalistic Theories.

Physical disgust motivation interference therefore demonstrates that consistent virtue-appropriate behaviour is psychologically unrealistic and it is not an achievable natural state, which consequently entails that Naturalistic Virtue Theories in their current forms, are established on a flawed understanding of human psychology and virtue and so can-not define natural human goodness.

3.2 The Naturalistic Reply

Naturalistic Virtue Theories can attempt to resolve this metaethical problem by once again recognising that physical disgust is fulfilling its evolved function when it interferes with virtue, so this is imposing a natural limitation on virtue which subsequently enables the adoption of a limited account of virtue in which an individual can be considered virtuous provided they are virtuous enough. Given that virtue defines natural goodness, this psychologically realistic limited account of virtue is now taken to define natural goodness. This solution accepts physical disgust's inhibition of virtue when its elicitor is the object of evaluation in moral situations but takes the Naturalistic Virtue Ethical characterisation of virtuous behaviour as psychologically accurate outside this motivation interference. Therefore, provided individuals display virtue outside this natural limitation, they can be considered virtuous enough to naturally flourish.

Sections 2.1.1 and 2.1.2 have already presented Annas' argument for the accommodation of natural limitation, and other Naturalistic Theorists have employed similar arguments for the accommodation of other natural limitations, which supports the utilisation of this argument as response to the outlined metaethical issue. For example, to accommodate for the capacity of natural human error, Swanton states her account sees virtue as a threshold concept, not demanding perfect virtue but excellent or 'good enough' behaviour from the individual for them to be considered virtuous (2003: 24). Similarly, Hursthouse recognises

that naturally occurring moral luck may inhibit the individual's capacity for virtue, yet it is still possible to judge an individual virtuous provided they take steps to make up for the negative moral effects of this bad luck where possible (1999: 118). Along with Annas' account, these examples demonstrate that Naturalistic Virtue Ethicists have already recognised the presence of natural limitations on the individual's capacity for perfect virtue, so it seems the presence of natural limitations are accommodated within the foundational understanding of natural goodness. Given the established natural roots of physical disgust motivation interference it seems reasonable to accept it among these natural limitations.

The following sections will now begin to explore the consequences of Naturalistic Theories accepting physical disgust motivation interference as a natural part of virtuous behaviour.

3.3 The Implications of Accepting Motivation Interference into an Account of Virtue

In accepting the presence of physical disgust motivation interference, Naturalistic Virtue Theories are faced with two options. They could either accept every instance of motivation interference on face value, acknowledging that whatever effect physical disgust has on motivation is a naturally occurring and therefore justified effect, and move on. Or they could attempt to make up for the deficit in virtue induced by motivation interference by recognising the need to develop virtue, in which case a naturalistically justified standard of virtuous enough behaviour would have to be developed[10]. Discussion shall now begin by examining the first presented option and then progress to the second.

3.3.1 Option One – Leaving Physical Disgust Motivation Interference Alone

By accepting physical disgust motivation interference as a natural inhibitor of virtue and not doing anything about it, Naturalistic Virtue Ethicists are committing to an imperfect conception of virtue. To establish their attitude toward this solution, it would therefore be useful to examine the Naturalistic Virtue Theoretical perspectives on imperfect virtue. Section 2.1.1 of this Chapter explored Annas's developmental account's attitude and found

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[10] It might seem that it is a foregone conclusion that individuals would be required to develop their capacity for virtue given the contents of the previous discussion of Annas' developmental account's resolution to the practical problem in Sections 2.1.1 and 2.1.2. However, such a discussion was undertaken with the practical feasibility of virtue in mind, and not the metaethical implications of committing to a limited account of virtue. So, discussion will raise further considerations unaddressed in the exploration of the practical problem.

that individuals could only be judged virtuous if they possess the drive to aspire, characterised as a desire to constantly develop their capacity for virtue (2011: 17)[11]. Swanton too recognises the unattainability of perfect virtue and formulates virtue as a 'threshold concept' in which "the standards for virtue are relative to context" (2003: 25). She also establishes the existence of the virtue of perfection, defined as *"being well disposed* with respect to striving for perfection or excellence" (2003: 207) which indicates that whilst her theory recognises the natural limitations imposed on virtue, the individual must strive to overcome them in a way suitable to their context.

Hursthouse does not directly discuss imperfect virtue and instead examines scenarios in which the individual's capacity for virtue is limited and directs the virtuous individual's behaviours from there. She recognises that where possible the individual should try to address the negative impacts caused by moral luck (1999:116-118), and elsewhere she recognises the virtuous individual has an obligation to address any residual moral failings produced by a situation in which they were forced to choose between doing two things that are equally wrong (1999: 44). As these instances of virtue restriction can be seen to be naturally occurring[12], this again indicates a requirement to rectify or improve the situations created by natural limitations, although this time the focus is on righting unavoidable wrongs rather than pre-empting limitations on virtue.

Overall, assessment of the Naturalistic Theories identified for examination draws a consensus that, when faced with natural limitations that lead to imperfect virtue, the individual must continually strive to develop their overall capacity for virtue to rectify this deficit as much as possible. This position makes intuitive sense, as an ethical theory that emphasises the possession and exhibition of valuable character traits cannot just accept impediments to these without consequence, and the virtuous thing to do would be to try to address these shortcomings in some way.

For these reasons, it seems like the individual cannot just 'sit back' and accept the presence of motivation interference and development becomes a necessary component of limited virtue. However, this now requires that Naturalistic Virtue Theories provide a justification

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[11] The justification for this perspective can also be found in this section.

[12] An instance in which the individual is forced into an irresolvable moral dilemma through no fault of their own can again be seen to be the product of moral luck.

for the natural goodness of limited virtue and development, as a theory that stipulates a limited account of virtue facilitates natural goodness but can explain why is metaethically unsound, this will be addressed in the following section.

3.3.2 Option Two – Addressing Physical Disgust Motivation Interference by Developing Virtue

Now that it has been established that in accepting a limited account of virtue, the individual must also commit to developing their limited virtue, and both the capacity for limited virtue and the need for development needs naturalistic justification, the following discussion will demonstrate how this is possible using the virtue of perfectionism.

The next section will provide an extended characterisation of Swanton's virtue of perfectionism — identifying relevant features of perfectionism and explaining how it can be used to establish a naturalistically justifiable account of virtuous enough behaviour. The following section will then use the principles of perfectionism to suggest an operable developmental strategy to mitigate motivation interference and increase the individual's capacity for virtue, thus demonstrating that Naturalistic Virtue Theories can present a naturalistically justifiable account of virtuous enough behaviour, which appears to solve the problem.

3.3.2.1 The Virtue of Perfectionism

To explain how the virtue of perfectionism can establish the conditions for virtuous enough behaviour, it will first be necessary to elaborate the nature of Swanton's virtue of perfectionism beyond the description provided in Section 3.3.1 as "*being well disposed* with respect for striving for perfection" (2003: 207). She provides an initial further explanation of perfectionism in that it does not necessarily entail emulating the supremely virtuous person, as this may lead to the imperfectly virtuous individual overreaching, or the imperfectly virtuous individual may not lead the same kind of life as the supremely virtuous person so emulation may lead to the misapplication of virtue and produce vicious behaviour (2011: 206-208).

She recognises that perfectionist striving requires "a sophisticated understanding of the relationship between the individual's own psyche, the facts of her behaviour in a specific

context, the social milieu in which she operates, and her attitudes towards the milieu" and is thus hard to achieve (2003: 208). However, she lays out some conditions that inform appropriate perfectionism: identifying it requires appropriate motivation and wisdom, self-knowledge of one's strengths and talents, knowledge of the contextual implications of their actions, the worthwhileness of the ends to which they are devoted, and the likelihood of success (2003: 209). She summarises that the virtue of perfectionism gives content to the statement 'do not be virtuous beyond your strength' (2003: 209)[13].

It is worth examining this statement 'do not be virtuous beyond your strength' as it provides valuable insight into the instantiation of perfectionism. First it demonstrates that, whilst development is necessary, there is a realistic limit on the amount of development that is required to display perfectionism, which makes the instantiation of perfectionism psychologically realistic. This also entails that the instantiation of perfectionism does not have to lead to perfect, or 'complete' virtue, as the developmental requirement for this would constitute virtue beyond one's own strength.

Furthermore, the stipulation 'do not be virtuous beyond your own strength' suggests that, if there is no practically operable means of developing virtue in a specific context, then development should not be attempted here as the pursuit of this unattainable goal would constitute virtue beyond one's own strength, and the wasted effort would constitute an improper manifestation of perfectionist striving. This does not mean the individual should give up on development, it instead implies their developmental energies should be redirected towards an area in which they could more effectively cultivate virtue. In regard to physical disgust motivation interference, this subsequently suggest that if there is no means to mitigate motivation interference in a way that expresses perfectionist striving, then Naturalistic Virtue Theories can in fact just accept motivation interference for what it is, but individuals would be required to direct their developmental efforts elsewhere[14].

Finally, Swanton's understanding of perfectionism can be seen to justify the natural goodness of limited virtue as it recognises the individual's capacity for virtue is naturally

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[13] This however comes with the recognition that this guiding principle is not absolute and does not enforce moderation, as some situation may require supererogatory behaviour in which the individual is virtuous beyond their own strength (2003: 210)

[14] The following section will explain that Naturalistic Virtue Theories can in fact do so, but the point still stands.

limited but acknowledges perfect virtue is the ideal natural state, so individuals should strive to develop virtue to maximise flourishing. However, it also recognises that, because perfect virtue is an unattainable ideal, it is possible for the individual to overreach in their developmental efforts which may in fact harm the individual's capacity to be virtuous and experience natural goodness[15], and subsequently outlines conditions for appropriately constrained development to balance these natural needs. Virtuous perfectionism therefore acknowledges the psychological reality of the individual's capacity for virtue, and outlines the conditions for realistic natural goodness through a limited developmental account.

Therefore, by identifying perfectionism as a virtue, Naturalistic Virtue Theories can provide a naturalistic justification for a limited developmental account of virtue, as appropriately constrained self-development facilitates achievable natural flourishing, and a successfully implemented development strategy constructed with virtuous perfectionist considerations can be said to constitute the conditions of virtuous enough behaviour.

3.3.2.2 Perfectionism and Motivation Interference Mitigation

As the virtue of perfectionism guides the individual's efforts to develop their virtue it can be used to formulate a developmental strategy to mitigate the effects of motivation interference, thus improving the individual's capacity for virtue and establishing the conditions for virtuous enough behaviour in the face of motivation interference. To do so, it is first necessary to establish whether there exists a viable means of motivation interference mitigation. Rottman et. al. have suggested that exposure to elicitors may serve as a habituation mechanism to reduce the intensity of physical disgust reactions (2019: 297), a proposal that Chapter 5 Section 3.1 has confirmed, identifying that that repeated exposure to specific elicitors serves to reduce the overall intensity of the individual's disgust reaction toward that elicitor. Therefore, targeted exposure to specific elicitors an individual knows they are likely to be exposed to can successfully address specific instances of motivation interference.

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[15] Observable through Swanton's discussion of the attempted emulation of perfect virtue, and the example in the following section of the individual that attempts to mitigate unknowable instances of motivation interference and ends wasting developmental energy and being virtuous beyond their own strength. Or the fact that constant pursuit of unattainable perfection may be detrimental to the individual's happiness, so an unrestricted developmental stipulation limits the harmonious experience of virtue, which is a contributing factor for them being recognised as naturally good.

From here, consideration of Swanton's conditions for the appropriate instantiation of perfectionism can inform the individual's motivation interference mitigation strategy. Knowledge of the contextual implications of their actions may prompt the individual to identify and address any instance of motivation interference that are specific to their line of work[16], or home context. Self-knowledge of one's strengths and talents may prompt the individual to identify elicitors they are not as sensitive to which consequently induce less severe motivation interference and means they will require less exposure therapy to adequately address. Whilst a consideration of the worthwhileness of the ends to which they are devoted may prompt the individual to identify any serious, near phobic, disgust reactions whose motivation interference they are going to have difficulty overcoming, this may lead to the individual potentially dismissing the mitigation of these as instances as inefficient development beyond the individual's own strength, prioritising more effective instances of mitigation. Or they might identify any instances of motivation interference that are not likely to occur that can be disregarded for the prioritisation of others. Perfectionism also facilitates the recognition of other contextual information, like prior commitments, which informs the level of effort the individual must put into their physical disgust mitigation strategy.

Consideration of knowable and unknowable instances of motivation interference can also contour the instantiation of virtuous perfectionism in motivation interference mitigation. To recap, knowable instances of motivation interference constitute times in which the individual is aware that a physical disgust elicitor will occur as the object of evaluation in a moral judgement and induce motivation interference, whereas unknowable instances constitute times in which the individual cannot know motivation interference will occur before they enter the moral situation.

Knowable instances can provide the individual with significant relevant information regarding motivation interference which they can then use to formulate their developmental strategy. For example, reviewing knowable instances of motivation interference can reveal the elicitors they are likely to encounter, the frequency with which they will engage with each instance of motivation interference, the intensity of the physical

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[16] For example, doctors and caregivers might have a clear idea of the types of physical disgust elicitors common to their job that might inhibit their capacity for virtue.

disgust reaction that will interfere with virtue, and the extent of the impact an instance of motivation interference will have on their virtuous behaviour. The individual can then review this information to identify which elicitors exposure therapy is most effectively targeted at to best improve their capacity for virtue.

However, given that individuals cannot pre-emptively identify what form unknowable instances of motivation interference will take, there is only limited relevant information available to the individual to guide their attempted exposure therapy. For example, discussion in Section 2 of this chapter identified that due to individuals being the subjects of moral judgement and behaviour, phenotypical difference and morphological irregularity are likely to frequently produce instances of unknowable motivation interference, and the individual could examine their pre-existing knowledge of their physical disgust reactions to identify any other frequently occurring reactions that have to potential to coincidentally occur as the object of evaluation. So the individual might have a general indication as to which elicitors are more likely to cause unknowable instances of motivation interference. However, for the most part, it will be difficult for the individual to identify which elicitors will affect virtue, to accurately identify when such instances of motivation interference will occur, how intense the motivation interference will be and how badly this will affect virtue.

Therefore, unknowable instances of motivation interference present epistemic problems for the generation of an effective strategy for their mitigation without the individual being virtuous beyond their own strength. For example, in light of this information, the effective mitigation of unknowable instances of motivation interference would require blanket exposure therapy to all physical disgust elicitors the individual might be frequently exposed to. This constitutes too much developmental effort for the potential positive effect on virtue to be said to be appropriately perfectionist as the individual's developmental energies may be better directed elsewhere. Furthermore, given that physical disgust ultimately exists to fulfil a natural function, if virtue required the mitigation of most physical disgust reactions, it might be said that virtue does not fit within the natural function of the individual. Whereas the carefully considered controlled mitigation of a few choice elicitors to maximise virtue may be understood to be maximising the individual's capacity for natural goodness, the blanket mitigation of physical disgust might therefore be said to contradict naturalistic principles.

Along with the considerations raised by Swanton, the individual can use this information to generate an effective motivation interference mitigation strategy that utilises target exposure to reduce physical disgust sensitivity towards those elicitors that they know will cause the most trouble for virtue, perhaps also addressing sensitivity to some elicitors known to frequently cause unknowable instances of motivation interference, whilst leaving those elicitors they know they do not frequently engage with.

This discussion has consequently demonstrated that the virtue of perfectionism facilitates the naturalistic justification of a limited developmental account virtue, and can also provide an account of sufficient 'virtuous enough' development in the face of the problem of physical disgust motivation interference. Given that this fulfils the conditions outlined for a psychologically realistic account of natural goodness, it seems like the problem should now be resolved.

3.3.3 Residual Problem of Value and Definition

However, despite being able to formulate a naturalistically justifiable account of virtuous enough behaviour, problems still exist in that the commitment to a limited account of virtue creates value and definitional problems for virtue and natural goodness.

In defining virtue as admirable character traits, when an individual is labelled virtuous enough in spite of physical disgust motivation, the presented Naturalistic Virtue Theories must accept they possess the admirable character traits that constitute virtue[17]. In doing so, they must also accommodate the potential effects of motivation interference within their definitions of the virtues, because how the virtues are instantiated becomes dependent on the potential presence of physical disgust motivation interference. For example, bravery was originally defined as doing the courageous thing in a situation, but now, is defined as doing the most courageous thing possible given the potential presence of physical disgust motivation interference. This entails that bravery can be manifested in all manner of ways depending on the presence of physical disgust motivation interference in a specific situation.

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[17] It does not seem logical to acknowledge someone as virtuous but claim they do not possess admirable character traits, as this is rejecting the possession of the very thing that constitutes virtue.

As the definition of the virtue now becomes contingent on the context in which it is displayed, this is problematic as it entails that when taken independently of context, the virtues themselves become meaningless as they depend on this context to define their content. Therefore, without context when we say someone is virtuous, we cannot be sure what this in fact means or implies, which makes the virtues insubstantial concepts. The characterisation of motivation interference presented throughout this thesis appears to be particularly problematic in this regard, as it recognises that motivation interference could occur at any time, to any degree, so virtue may end up with a unique definition in each instance of motivation interference, changing from instance to instance, person to person, and context to context producing endless, potentially conflicting definitions of virtue.

A further issue arises in that because virtue is now contextually defined, the value of a virtue is now contingent on the context which defines it. For example, bravery in war is not valuable in a context that defines bravery as an expression of strength in the face of a terminal diagnosis. Therefore, when understood independently of context, there is no way to establish the value of each virtue, so it becomes unclear why they are worthwhile pursuits. In establishing that there is no independent value to the virtues, it then also becomes unclear as to why contextual virtue, such as bravery in war, is itself valuable, as there is now no compelling independent justification for its value.

In accepting that virtue limited by physical disgust motivation interference defines natural goodness, an individual's natural goodness then becomes contingent on their contextually limited understanding of virtue produced as a result of this. Not only does this create definitional issues for natural goodness in much the same way as it does for virtue[18], as multiple different, potentially conflicting understandings of natural goodness emerge and entails that there is no substance to the concept of natural goodness. It also creates a circular justification for natural goodness as natural goodness is defined through physical disgust inhibited virtues and virtue is defined as admiral character traits limited by disgust that produce natural flourishing — defining virtue in terms of flourishing and flourishing in terms of virtue. This consequently creates a justifiability issue for the value of natural goodness as there is no way of independently justifying its value beyond this self-

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[18] Which should be expected because Naturalistic Virtue Theories uses virtue to define natural goodness.

justification, which is problematic as it assumes what it attempts to prove. So, there is no valid or compelling reason for why it is valuable to be contextually virtuous, or why it leads to actual natural flourishing.[19]

Discussion has therefore established that a concept of perfect virtue originally presented by those Naturalistic Theories discussed in this thesis is psychologically unrealistic so cannot define human natural goodness. However, a limited account of virtue, naturalistically justified through the virtue of perfectionism, is equally incapable of defining natural goodness, for two reasons: it is unable to provide a meaningful understanding of the virtues; and it is unable to justify why behaviour from limited virtue is valuable as it cannot provide a compelling reason for why limited virtue leads the individual to natural goodness. Further consideration identifies no other way of justifying the value of incomplete virtue from within the identified Naturalistic Virtue Theories, meaning the metaethical problem endures as Naturalistic Virtue Theories cannot present a psychologically realistic yet justifiable account of virtue as natural goodness in the face of the problem of motivation interference.

4 Conclusion

Overall, discussion established that physical disgust motivation interference poses both a practical and a metaethical problem to Naturalistic Virtue Ethics. Discussion of the practical problem determined that physical disgust towards an elicitor occurring as the object of evaluation in moral judgments can consistently interfere with the individual's capacity to exhibit the appropriate behaviour required by virtue, which makes the attainment of virtue practically impossible. This problem was resolved by recognising that the idea of perfect virtue was an unattainable ideal and adopting Annas' developmental conception of virtue that recognises individuals with incomplete virtue can be considered 'virtuous enough' provided they possess the need to learn and drive to aspire.

The metaethical problem identified that Naturalistic Virtue Theories depend on the psychological reality of the consistent virtue-appropriate behaviour for the feasibility of their conception of natural goodness, and the Dual Mechanism Theory challenged this

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[19] This differs from a complete account of virtue, which does not lead to circularity, as each virtue is defined independently of flourishing and valued because their exhibition displays behaviour considered naturally beneficial to the organism. Incomplete virtue cannot make this same naturally beneficial argument because, on an incomplete account, the virtues do not have consistent content.

characterisation by using motivation interference's capacity to interfere with consistent behaviour to show that this was psychologically unrealistic. The capacity to resolve this problem by committing to a limited account of natural goodness was then considered and it was established that to do so would again require commitment to a developmental account. The virtue of perfectionism was then formulated, and discussion established this was able to establish a naturalistically justifiable limited development account of virtue.

However, the chapter concluded by establishing that committing to an account of virtue limited by physical disgust motivation interference led to a contextually limited account of virtue. This caused value and definitional problems for virtue and natural goodness which consequently entailed a limited account of natural goodness would be meaningless and unjustifiable. Given that Naturalistic Virtue Theories' conception of perfect virtue was psychologically unrealistic, and an attempt to commit to limited virtue was meaningless and unjustifiable, it was concluded that the metaethical problem remained and virtue is unable to define natural goodness in its current form.

Chapter Seven – Attitude Virtue and an Updated Formulation of Natural Goodness

1 Introduction

Before concluding the thesis, the following two chapters will explore whether moving away from character trait-based formulations of naturalistic virtue can provide a productive approach from which to address the problem of motivation interference. As such they will examine whether Attitude Virtue, which maintains a naturalistic foundation but holds that virtue can be understood as a cluster of strong attitudes, has the capacity to resolve these problems. To do so, it will first be necessary to characterise Attitude Virtue and explore its relationship with natural goodness (which will be done in this chapter) as this provides the apparatus from which to successfully analyse Attitude Virtue's ability to resolve the problem of motivation interference (which will be done in the following Chapter 8).

This chapter will therefore begin by presenting Jonathan Webber and Alessandra Tanesini's characterisation of attitudes drawn from their respective examinations of attitude psychology, and then discuss how the characteristics of attitudes make them viable candidates for instantiating virtue. It will then examine Attitude Virtue's compatibility with some thesis relevant concepts, specifically how clusters of attitudes can be understood to constitute meaning structures and how Attitude Virtue is compatible with developmental virtue. This will establish whether it can be suitably incorporated into this thesis and be used as a resolution strategy.

The chapter will then determine that reformulating virtue through attitudes identifies features of living naturally that are overlooked by Foot, which subsequently requires an updated account of natural goodness. Irene McMullin's (2019) criticism of Foot's account will also be presented to develop analysis on the limitations of Foot's account, and McMullin's phenomenological account of natural goodness will then be established as a viable alternative account of natural goodness, one that is able to accommodate all identified further considerations about living naturally. The chapter will conclude by discussing how Attitude Virtue can successfully instantiate this updated understanding of natural goodness, which subsequently justifies why clusters of attitudes can be considered virtuous in the first place.

2 Attitude and Virtue

This section will begin by presenting a characterisation of the psychology of attitudes using both Jonathan Webber and Alessandra Tanesini's descriptions. Webber and Tanesini present broadly similar accounts of attitude yet differ in some places which will be identified where appropriate. This will be followed by a discussion of attitude psychology's compatibility with virtue, and attitude psychology's compatibility with meaning structures and developmental virtue.

2.1 Characterisation of Attitudes Within Psychology

Webber defines an attitude as a "cluster of cognitive and affective states that together make up an overall evaluation of an object" (2013: 1085). He expands, stating that anything can be the object of an attitude and attitudes can exist at all levels of abstraction (2013: 1085). For example, individuals can have attitudes towards a type of shoe, one's appearance, the state of the world's current socio-political landscape, or about the thought of their own death. In a later article he elaborates that an attitude must have an object and an attitude "is usually described as relating its object to a positive or negative valence" (2020: 3). For example, I may have a positive attitude towards my new shoes, or a negative attitude towards the state of the world's current socio-political landscape[1].

Tanesini's characterisation can be used to extend this account as she identifies and explains further features of attitudes, these being content, structure, and function. She explains an attitude's content refers to the "informational basis from which the attitude is derived" (2022: 281). For example, my positive attitude toward my shoe might be informed by a knowledge of the high-quality material used for its construction, its appearance, the intentional design and technology in the shoe that makes it good at fulfilling its purpose, and the feel of the shoe on my foot. Tanesini describes attitudes as the product of assessing the relevant considerations about the object and expressing summaries of their informational content. Citing Banaji and Heiphetz (2010) and Fazio and Olson (2007) who

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[1] Webber explains a positive valence is often described as liking or valuing, and a negative valence is disliking or disvaluing (2020: 3). He identifies social psychologists often use liking and valuing synonymously, but the two terms are not the same as liking and disliking signifies enjoyment or finding something unpleasant, whereas valuing and disvaluing something is to consider it either good or bad. Consequently, it is possible to distinguish between attitudes, such as I like jam, and evaluative attitudes, such as thinking democracy is a good thing. Webber identifies evaluative attitudes to be the constituents of virtuous attitudes.

determined attitudes save time and cognitive effect, she also characterises them as cognitive shortcuts for this informational content.

The structure of an attitude concerns how the information basis and content of the attitude are ordered within cognition to determine the attitude's influence on behaviour (2022: 282). Tanesini states that "recently, the view that the information included in the attitude content is structured along two dimensions has become dominant", in which positive and negative elements are aggregated separately, and respond appropriately depending on which part of the collective attitude is salient on a particular occasion (2022: 282). For example, an individual may love the taste of chocolate but dislike its calorific content, informing both positive and negative attitude, whichever constituent of their attitude toward chocolate they express therefore depends on the context in which it is considered.

Finally, Tanesini identifies that attitudes are "formed, modified, and maintained in order to satisfy human need" (2022: 282), what need an attitude fulfils determines the function or functions the attitude serves. She identifies the study of attitude function is not universally engaged with due to difficulty in measurement and taxonomy, however, she utilises it because of its usefulness "when explaining the effects of attitudes on information processing and other inquiry-relevant cognitive activities" (2022: 283). Consequently, she identifies six function taxonomies that have gained general acceptance: "object appraisal, knowledge, instrumental, ego-defensive, social adjustive, and value expressive" (2022: 283)[2].

Webber and Tanesini's understanding of attitude psychology is mostly similar, however, they differ in their understanding of the structure of attitudes. Similarly to Tanesini who identifies an attitude's content derives from its underpinning informational basis, Webber identifies the content of an attitude "is determined by the attitude's base, which is the set of beliefs and desires relevant to the attitude's object" (2020: 5)[3]. However, in exploring how an attitude's content relates to its base, i.e., how the content structures the attitude, Webber states: "it would be simpler to consider the evaluative attitude to be nothing other than the set of mental states that compose its base: the attitudes content is determined by

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[2] For the sake of brevity, a characterisation of each proposed function shall be omitted, however, a brief characterisation of each is provided by Tanesini (2022: 283).

[3] Webber refers to beliefs and desires here as he is currently focusing on evaluative attitudes.

the attitude base simply because the attitude is the same thing as that base" (2020: 5). This differs from Tanesini's account who determines attitude to be a separate mental state caused by its base which encompasses all the different information, beliefs, and desires relevant to the object, thus forming an attitude toward and object[4].

Finally, before discussing attitude psychology's compatibility with virtue, it is worth noting further important features of attitudes, specifically strength and accessibility[5], have yet to be discussed. These features inform the presence and influence of attitudes on individual cognition and behaviour, but do not add to the description of the structure of attitudes themselves. It is enough then for the initial characterisation of attitudes to present the fundamental components of attitudes here, and these further features will be discussed later where appropriate.

2.2 Attitude Psychology's Compatibility with Virtue

Both Tanesini (2022: 287) and Webber (2020: 11) connect virtue to attitude psychology by claiming that virtue can be understood to consists of a cluster of strong attitudes that facilitate natural goodness[6]. For example, Webber describes the virtue of honesty as consisting of "the attitudes towards lying, cheating, and stealing that one ought to have, along with an understanding of why one ought to have them and the deep conceptual relations between them" (2020: 11). To justify this claim, it will be useful to explore the connections and similarities Webber and Tanesini draw between attitude and virtue.

First, Webber identifies four modes through which individuals express virtuous behaviour, beginning with the identification that specific reactive dispositions towards certain stimuli are necessary for virtuous behaviour. He states: "someone lacking the disposition to

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[4] This chapter shall not engage with the debate regarding which provides the more accurate characterisation, as the following sections demonstrate both scholars' accounts are capable of being integrated into Naturalistic Virtue Theory and the debate is not relevant to any further consideration regarding the capacity for Attitude Virtue to accommodate the problems posed by disgust. The intention here was to provide an accurate account of each perspective.
[5] An explanation of which shall be presented shortly in Section 2.3.2.
[6] Tanesini explicitly establishes Attitude Virtue's naturalistic foundation, stating "We can think of moral virtues as clusters of strong attitudes toward a range of objects and situations that contribute to the flourishing of those who have them "(2022: 287). Webber's founding Attitude Virtue in naturalism is less obvious, but can be observed in his description of how attitude can instantiate Aristotelian principles of virtue (2013: 1087-1088), and reference to other naturalistic approaches which he then uses as justification for attitude virtue (2020: 12).

respond helpfully, compassionately, prudently, or honestly when the need arises in front of them cannot count as helpful, compassionate, prudent or honest" (2013: 1084). Second, he identifies traits that are not reactive but reflect a general concern for situational details, such as circumspection and considerateness (2013: 1084). Third, "traits that are primarily characterised by the kinds of situations that one aims to bring about, regardless of the situation one is in when one does this" (2013: 1084) for example adventurousness and kindness. Finally, Webber identifies traits concerning one's own commitments, such as constancy and integrity.

Webber then identifies that all these modes of behaviour necessary for virtue can be instantiated by attitudes (2013: 1085). For example: a negative attitude towards lying can inform virtuous reactive behaviour towards liars, a caring attitude can both lead to a general concern for situational detail to demonstrate the virtue of considerateness and bring about a specific type of virtuous situation one is aiming for, and a responsible attitude can display virtuous constancy and integrity. This demonstrates attitudes can therefore provide a comprehensive representation of virtue, providing initial support for their use as a model for virtue.

Tanesini identifies features of attitudes that display similarities with features of virtue established throughout this thesis. She characterises attitudes as often being "central and important to the person" being "part of a person's character", and identifies evidence that shows when an attitude is strong, central, and held with certainty "they are stable over time and consistent across situations" (2022: 285-286). She also cites evidence that attitudes are "enduring dispositions that influence a broader range of behaviours" (2022: 286). This description aligns with Annas's characterisation of virtues presented in Chapter 1 Section 2 that establishes them as deep features of an individual that embody their personality. It also reflects Annas' (and other virtue ethicists) stipulation that the genuine possession of the virtues entails that they are stable features of an individual's character and consistently displayed throughout life.

She elaborates that "the same point can be made in functional terms. Some attitudes satisfy the need to express one's values" (2022: 285). Attitudes are not passive features that govern opinion and nothing more, they motivate behaviour, and considering the previous discussion of attitude consistency, it can be assumed those attitudes that motivate

behaviour do so consistently and reliably. This again aligns with Annas's characterisation in Chapter 1 Section 2 of virtue being an active concept. An individual is not virtuous if they know what the appropriate course of action is but do not act, they must display virtue through consistent behaviour. Tanesini's identification that only *some* attitudes satisfy the need to express one's value implies that not all attitudes motivate behaviour. This is not problematic for compatibility provided the attitudes that express virtue do in fact motivate behaviour when it is appropriate to do so, which seems likely given that virtues are described as core character traits and are likely to be expressed in stronger attitudes, and Webber identifies "stronger attitude are more consistently expressed in behaviour" (2020: 8).

Tanesini then discusses the cognitive characteristics of attitudes, describing them as intelligent, with the capacity to change "in response to novel experiences or when acquiring further relevant information" (2022: 286). A similar intelligence is ascribed to virtue, for example Hursthouse's description of a virtue as the right act, for the right reasons, from the appropriate feelings presented in Chapter 1 Section 3.1.1 establishes a capacity to respond appropriately to situational cues, which entails virtues are sensitive to experiential data and other relevant information. Tanesini also describes attitudes as stubborn and resistant to new information, however, argument quality and message persuasiveness are factors that can influence attitude change (2022: 286). Stubbornness can also be expected from a deeply held character trait — if an individual has a strong perspective on a negative behaviour that they think is justified by relevant information it will take significant persuasion to overturn this perspective.

Tanesini also identifies that "attitudes have an emotional element since their contents include affective and emotional components" and she claims an attitude's emotional component is significant as it often predicts the subject's attitude (2022: 286). Once again, this demonstrates the feasibility of the expression of virtue through attitudes, as virtue theories identify that an appropriate emotional disposition is necessary for virtuous behaviour. It is promising that Tanesini identifies the emotional component of attitudes predicts the subject's attitude, as this suggests the emotion is in congruence with the attitude in much the same way as Virtue Theory expects emotion to be with virtue.

An important point can be raised here in that this suggests a less direct relationship between attitudes and emotions - Tanesini determines emotions *predict* attitudes, suggesting congruence, but does not identify emotion directly correlates with attitudes. Consequently, unlike character trait-based virtue theories that require a perfect emotional reaction to demonstrate the individual possesses a complete virtuous character, this does not stipulate the same conditions of emotional perfection as a necessary constituent of displaying virtue through attitudes, thus allowing for a weaker connection between virtuous attitudes and emotion[7].

Finally, Tanesini identifies that the display of virtue through strong attitudes fulfils the value expressive function of attitudes as the expression of virtue communicates what the individual judges to be good and bad behaviour in the pursuit of human flourishing (2020: 287). The communication of virtue judgements could also be seen to fulfil the social adjustment function, as the communication of moral judgements can often motivate behaviour change. So, virtue can be placed within the established functions of attitudes.

Overall, evidence from Webber demonstrated that attitudes can express all modes of virtuous behaviour, and evidence from Tanesini demonstrated a strong similarity between the characteristics and cognitive behaviours of attitudes and virtue. Attitude psychology can therefore provide a full accounting of virtue and sufficient evidence has been presented to justify its instantiation of virtue.

2.3 Attitude Virtue's Compatibility with Thesis Relevant Concepts

Now that compatibility between attitude and virtue has been established, it will be useful to discuss attitude psychology and attitude virtue's compatibility with further thesis relevant concepts. This will provide further evidence for attitudes' capacity to instantiate virtue, establish attitude virtue's feasibility for use within this thesis by demonstrating compatibility with relevant concepts, and begin to establish attitudes' relationship with the psychology of disgust. The first section will explore attitudes' relationship with meaning structures,

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[7] Whilst presenting an interesting further consideration for Attitude's relationship with virtue, this shall not be discussed any further here as a more detailed analysis of attitude's existing relationship with emotion would be required to establish with certainty Attitude Virtue's relationship with emotion, and given that Chapter 5 Section 2.1.2 determined that it is unclear whether physical disgust motivation interference in fact had an effect on emotion, it is uncertain whether such a discussion would in fact be relevant for the coming discussion of the problem.

identifying that clusters of attitudes can be understood to be the meaning structures that inform social disgust, and the following section will discuss attitudes' compatibility with developmental virtue.

2.3.1 Attitude's Relationship with Meaning Structure

As the previous section discussed attitude's relationship with emotion and how this can adequately instantiate the Naturalistic Virtue Ethical perspective on emotion, it is not necessary to discuss attitude's compatibility with the emotion of social disgust. However, examining attitude's relationship with the meaning structures that inform social disgust can fruitfully situate attitude's relationship with social disgust. Through the comparison of the definition, function, content, and development of attitudes and meaning structures, this section will identify similarities that entail attitude clusters can be understood to be the meaning structures that social disgust protects[8].

First, analysis of the established definitions of attitudes and meaning structures can lead to the identification that they are describing similar things. Webber defines an attitude as a "cluster of cognitive and affective states that together make up an overall evaluation of an object" (2013: 1085), and Hanna and Sinnott-Armstrong define meaning structures as the "psychological frameworks of predicted relations between ideas and concepts. These epistemic structures are used to impose order and meaning to the world" (2018: 100). Therefore, both attitudes and meaning structures engage a group of cognitive states to structure an individual's understanding and produce a unique perspective that contains both evaluative and non-evaluative judgements.

To observe the functional similarity this produces, it is useful to examine the established relationship between each respective concept and virtue. Webber and Tanesini identified that a cluster of attitudes inform the content of virtue, and meaning structures have been previously identified to inform the content of virtuous disgust. Therefore, meaning structures and attitudes can be taken to fulfil the same function – informing the content of

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[8] Given the doubts established in Chapter 3 Section 4.3.1 regarding meaning structures' capacity to inform physical disgust reactions, similar doubts can be raised about attitudes informing physical disgust reactions, so it is important to recognise this discussion will only pertain to attitude's relationship with social disgust. However, such a discussion is still valuable to engage in as it positions attitude's relationship with disgust and within this thesis as a whole.

virtuous disgust. This functional similarity can be then extended beyond informing the content of virtue, to informing the content of general or evaluative perspectives For example, attitudes and meaning structures inform the content of general (virtue unrelated) social disgust reactions, or other concepts such as political opinion, or the individual's perspective on a particular type of sport.

The next point of similarity which supports the argument that attitudes are meaning structures is that attitudes and meaning structures have identical content. Tanesini (2022: 281) identified three components that inform the content of attitudes; cognitive elements that consist of evaluative beliefs; affective elements that consist of emotions, moods, and feelings; and past experiences of the object (2022: 281). In fulfilment of their functions of ordering and maintaining the individual's understanding of the world, meaning structures can be seen to contain the same cognitive and experiential components such as facts, experiential data, beliefs, desires, and opinions[9].

Similarity in content can also be observed in the fact that Tanesini (2022: 282) identifies the informational basis of attitudes can be positively or negatively valenced, and meaning structures can also contain positively and negatively oriented content which informs the individual's overall perspective on an object[10]. Webber also identified attitudes can exist on all levels of abstraction (2013: 1085), and meaning structures can also concern equally varied objects – forming the individual's understanding of concrete entities such as food and cars, to abstract entities and concepts such as morality and God.

Finally, it can also be observed that attitudes and meaning structures developed in the same way, Tanesini identifies elsewhere that "attitudes are learnt. They are formed on the basis

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[9] It is worth noting here that whilst the attitudes psychology and meanings structures appear to describe a different relationship between their respective psychological concepts and emotion, with meaning psychology determining disgust *enforces* meaning and Tanesini identifying emotion *informs* the content of attitudes. The two perspectives on the relationship are not incompatible as the affective experience towards specific elicitation criteria that align with the content of an attitude or meaning structures can influence the formation of that attitude or meaning structures and can therefore be considered as part of the content. Whereas affective experience produced can also reinforce and maintain the attitude and meaning structures themselves, as the individual experiences a positive feeling towards an object they have a positive attitude or meaning structure for, and vice versa.

[10] For example, an individual's social disgust meaning structure may have positively valenced content towards honest people and negative content toward dishonest people.

of experience, past behaviour, other attitudes, background beliefs, needs, desires and emotions." (2016: 508). This matches the development of meaning structures identified in Chapter 3 Section 4.2 which established meaning structures are developed through experience and relation to other meaning systems.

Taken together, the facts that attitude and meaning structures are definitionally similar; functionally indistinguishable in regard to their relationship with virtue and how they inform perspectives; they contain the same content that informs the same reactions to the same range of objects; and that they developed in the same way, all point towards the conclusion that an individual's attitudes *are* their meaning structures. Therefore, when we talk about meaning structures, we are in fact talking about the underlying attitudes that inform the individual's understanding of the world. Intuitively, the expression of an attitude may be understood to instantiate only a part of a meaning structure. For example, an individual's negative attitude towards stealing that results in a social disgust judgement can be seen to reflect part of the individual's overall understanding of negative character traits. Therefore, it can be assumed that a web of attitudes constructs meaning, similarly to how a web of attitudes constitutes virtue.

More work that is beyond the scope of this thesis is necessary to solidify this connection and explore questions about this potential relationship further. However, an initial examination has demonstrated similarities that indicate compatibility. This compatibility also contributes to the justification of use of Attitude in this thesis.

2.3.2 Attitude Virtue's Compatibility with Developmental Virtue

Given the naturally occurring virtue-limiting effects of physical disgust motivation interference, and Attitude Virtue's naturalistic foundation entailing that any resolution to the problem is going to have to accommodate these effects rather than overcome them, Attitude Virtue will likely have to accept a developmental account of virtue to recognise the imperfection in virtuous behaviour disgust causes. As such, it would be useful to discuss Attitude Virtue's compatibility with the developmental perspective.

Webber states "research into the development of attitudes supports the idea, common to many virtue ethicists following Aristotle, that habituation is central to character formation" (2013: 1087). This implies that, similar to character trait-based virtue, virtuous attitudes

must be developed and habituated to solidify them as persisting features of an individual's personality. Webber then proceeds to explain that attitude development can also instantiate the two roles Aristotle assigns habituation in the development of virtue. The first role Aristotle attributes to habituation is "to ensure that evaluative commitments are embedded in behavioural cognition sufficiently to withstand temptations to act against them" (2013: 1087). Consistent and repetitive virtuous action embeds the disposition within the individual's personality, enabling them to reliably display it and overcome the influence of "a strong bodily appetite or a strong habituated character trait" (2013: 1087).

Webber identifies experiments from Axsom and Cooper (1985) that demonstrates repeated behaviour that expresses an attitude increases the attitudes strength and accessibility (2013: 1088). Webber defines attitude strength as "the degree to which it [the attitude] is held, which means how strongly it is embedded into one's overall cognitive system" (2020: 6) it is a determinant of the likelihood of an attitude influencing an individual's cognition of a particular occasion, and attitude accessibility as "the speed with which it is brought to bear on cognition" (2013: 1089). Therefore, similarly to the repeated display of virtue, "each application of the attitude … increases both the readiness with which it will be applied in future situations and the degree of influence it will have when it is applied" (2013: 1087) it embeds the attitude more solidly within the individual's personality, enabling them to consistently and reliably display it.

The second role Aristotle attributed to habituation is "the development of ethical knowledge" (2013: 1088). Webber identifies an Aristotelian understanding of virtue stipulates an individual must possess a detailed understanding of the value of their virtuous behaviour, and understanding is only fully realised by assimilating theoretical knowledge of the value of virtue through repeated practice (2013: 1088).

Webber identifies that the content of an attitude is determined by "its constituent cognitive and affective mental states" and "the contribution a particular state makes to that overall content is weighted according to its centrality in the set, which is a matter of the number and strengths of its connection to the rest of the set" (2013: 1088). Adding a new relevant mental state to the attitude refines the content of attitude, and the repetitive activation of this new mental state strengthens it, and its connection with the overall attitude. Each new mental state added to the attitude further refines the attitude and adds to the overall

content and complexity of the attitude (2013: 1088). Therefore, "the greater the experience of applying the attitude, the more sophisticated the content of that attitude" (2013: 1089). Developing virtuous attitudes therefore instantiates the development of ethical knowledge as the repeated practice and exhibition of the attitude generates a detailed understanding of the ethical content of virtues.

Overall, this discussion demonstrates that the development of an attitude matches the development of a virtue — repeated learning and practise habituates the disposition so it is strong enough to overcome other desires and be considered an embedded part of the individual's personality, whilst also generating a deep and detailed understanding of the value of the value virtuous the behaviour. The necessity to habituate virtuous attitudes also implies that individuals begin in a similar pre-virtuous state of attitude similar to natural virtue — the content of an individual's attitude may have some inclination toward virtue that requires practice and development to fully understand their value and embed them as character traits.

Finally, neither Webber nor Tanesini identify an end state of attitude development in which the individual is considered fully virtuous and does not have to develop their character any further which suggests attitude development can be viewed as a continuous process in which the individual strengthens and refines their virtuous attitude throughout life. This is in continuity with the necessity of constant development that Annas' developmental approach establishes to counteract the effects of limited virtue. Also, this section has identified Attitude Virtue's capacity to recognise one form of virtue development — that of improving insufficient virtue through habituation — and discussion has identified development can exist in different forms[11].However, this discussion demonstrates Attitude Virtue can recognise insufficiencies in virtue and address them, which suggests it is equally capable of adopting other forms of development.

Therefore, given that attitudes develop in much the same way as character virtue, virtuous attitude development can be considered a continuous process, and it seems Attitude Virtue

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[11] For example, exposure therapy for motivation interference

can adopt other developmental strategies, attitude virtue can be considered compatible with a developmental conception of virtue[12].

3 Developing Natural Goodness

Defining virtue as attitudes also motivates a re-examination of natural goodness, as attitude psychology introduces facts about natural behaviour that prompts a deepening of our understanding of natural functioning. Redefining virtue in terms of attitudes also changes the question of virtue's relationship with natural goodness from 'what about this character trait makes it a virtue' to 'what about this cluster of attitudes makes it virtuous?' These two considerations are linked as developing our understanding of living naturally will redefine the conditions of natural goodness, which will subsequently determine the conditions that need to be met by virtue to inform the question 'what about this cluster of attitudes makes them virtuous'. Therefore, to answer the latter question it will be first necessary to establish a new understanding of natural goodness.

With this in mind, this section will begin by recapping Foot's account of natural flourishing and then present considerations about living naturally identified from the examination of attitude psychology that demonstrate Foot's account is limited in describing the full extent of natural human behaviour. It will then present further considerations raised by Irene McMullin in *Existential Flourishing* to widen the scope of natural flourishing and present McMullin's formulation of natural goodness as a possible alternative account. It will be identified that her account can accommodate both the considerations she raises and those identified through consideration of attitude psychology, so it will be accepted as the new formulation of natural goodness.

The following Section 4 will then explain how Attitudes Virtue can better accommodate this more accurate conception of living well when compared to character trait-based virtue,

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[12] As Chapter 6 Section 3.3.2.1 identified perfectionism as the virtuous instantiation of development, it may seem that a discussion of Attitude Virtue's capacity to adopt a development account also requires a discussion of its capacity to manifest virtuous perfectionism. However, an appropriate manifestation of perfectionism is contingent on the insufficiency in virtue it is addressing, so to discuss Attitude Virtue's capacity for virtuous perfectionism in the context of the thesis would be to directly discuss the problem of motivation interference, which will be saved for the following chapter.

which will simultaneously justify why virtuous attitudes can be said to lead to natural flourishing.

3.1 Foot's Account

Chapter 1 Section 3.1 began by presenting Foot's account of natural goodness which has been utilised as the foundation of all the Naturalistic Virtue theories discussed in this thesis. To recap, Foot argues that because humans developed naturally alongside plants and animals, our good function can be assessed in a similar way to how we would assess the good functioning of these other organisms. She claims natural goodness is "'intrinsic' or 'autonomous' goodness in that it depends directly on the relations of an individual to the 'life form' of its species" (2001: 27), it is the criteria of good functioning for an organism in relation to its environment. For example, a giraffe has evolved to eat foliage from trees that grow too high for other animals to reach, as such its neck being long enough to facilitate this is a condition for its natural goodness.

Foot recognises that humans are similar to animals in that we have natural necessities, such as a need for the capacity for speech, hearing, language learning, and imagination, without which we may find it *harder*[13] to function well (2001: 43). However, we differ from animals in that we have the capacity for rationality which subsequently generates reasons for behaviour and introduces the capacity for ethical evaluation and behaviour into our life (2001: 56). This therefore constitutes the conditions of human natural goodness, which Foot then claims are met by virtuous behaviour.

3.2 Considerations about Natural Goodness Raised by Attitude Psychology

Considering the features of natural behaviour identified through the examination of the psychology of attitudes reveals further characteristics of natural behaviour beyond those already identified by Foot.

First, Webber's discussion of courage[14] identified that individual's attitudes develop within specific contexts (2020: 12). Taken alongside the previously identified fact that social disgust is contextually developed[15], this provides compelling evidence for the fact that contextual

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[13] But not impossible.
[14] Soon to be elaborated on in Section 4.1 of this chapter.
[15] Determined in Chapter 3 section 4.2.

development and existence informs much of the individual's lived experience, and is an important factor to consider when characterising how individuals live naturally. Whilst Foot recognises variation for the conditions of natural goodness on the species level, she does not recognise within species variation and the implications this has for natural goodness. Her understanding of human's relationship with reason to facilitate a good life can be challenged, as whilst reason can still be employed within each context to live morally, the content of reason itself turns out to be contextually determined[16], so each context can be said to contain their own conditions for natural goodness.

Second, Webber's discussion of universal virtue and honesty demonstrates individuals also naturally exist in different normative domains. In a discussion considering the capacity for universal virtue, Webber identifies that a virtuous attitude can be considered universal if they are features that are "essential to the human condition" (2020: 15). To demonstrate his point, he identifies that to be human is to belong to an epistemic community (2020: 15) — humans naturally reside in knowledge sharing networks and "one essential aspect of the human condition is that we require information" and "rely on one another for information" (2020: 15). The possession and distribution of accurate information is an essential component for the individual to live well in the world as it enables the accurate communication of events so individuals can properly understand their implications and make appropriate judgements, and it also helps group members to accurately structure their understanding of the world.

Given that we rely on one another for this information, Webber states: "we therefore ought to have both strong attitudes against lying and misleading" as this protects the accurate dissemination of information (2020: 16). As such, honesty can be considered a universal virtue when it is considered in this normative domain, as all communities require the epistemic consistency it facilitates to function well. Webber consequently identifies virtuous honesty in relation to belonging to an epistemic community as "the virtue of dealing appropriately with this membership in an epistemic community" (2020: 15).

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[16] For example, the reasons for why an individual is brave, and subsequently naturally good in a warzone are not the same as those in a peaceful environment, and vice versa.

This argument has significant implications for an understanding of Natural Goodness as it demonstrates humans naturally exist in different normative domains and these present different considerations for living well naturally. Returning to the example of virtuous honesty, the conditions for virtuous interpersonal honesty are contextually determined and can vary in terms of how much honesty is morally appropriate, whereas virtuous epistemic honesty is cross contextual and maintains a consistent standard of appropriately virtuous behaviour in this domain.

This argument therefore identifies a significant feature of living well naturally overlooked by Foot's theory, one that can in fact be seen to have an effect on Foot's conception of natural goodness as a consistent epistemic community has bearing on the individual's capacity to appropriately cognise situations, which subsequently affects their capacity to employ practical reason[17] in interpersonal domains. It is therefore an important fact about natural behaviour to consider when constructing an account of natural goodness.

Sufficient evidence has therefore been presented to confirm that Foot's account of natural goodness is not fully accommodating of the reality of natural human behaviour, and needs updating to recognise these presented considerations and any further that can be identified.

3.3 McMullin's Account of Natural Goodness

McMullin shares the concern that Foot's account is limited, but critiques it from a different angle. She examines virtue from a phenomenological perspective and argues that "by conceiving of the moral agent simply as an instantiation of a natural kind, the individuation of the self in the struggle to be the best version of itself is obscured" (2019: 1). By formulating natural goodness as the organism functioning well in relation to natural habitat, Foot has overlooked key features that inform human experience, and has limited our capacity to flourish. McMullin identifies that "to be human is to be consumed with the deeply personal question 'what does it mean for me to be?'", flourishing then, "cannot be understood without addressing this first-personal dimension of experience" (2019: 2).

This belief that an account of flourishing necessarily requires consideration of the first-person dimension of experience informs her later criticism that Foot's notion of natural

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[17] The Aristotelian concept, defined by Hursthouse as "the ability to reason correctly about practical matters" (1999: 12) which is improved through the habituation of virtue.

goodness is too objective. By defining goodness purely in terms of function and not considering the attitudes of the agent "it is possible for an agent to despise or feel alienated from something that, objectively speaking, is constitutive of her well-being" (2019: 28). She uses the example that learning to play chess is considered to be more conducive to Foot's understanding of flourishing than watching television, because chess involves social interaction, intellectual challenge, capacity for growth and skill development, all features which provide an opportunity to develop and display virtue and provides an opportunity for personal development. However, she recognises this approach seems to neglect the individual's first-person experience as, whilst they are 'flourishing', they may in fact despise chess[18] (2019: 28).

McMullin recognises that Hursthouse's formulation of virtue does attempt to avoid this issue by specifying four goals of higher animals. The first three goals are individual survival, species survival, and group functioning and these are fulfilled by virtue[19] (2019: 28). The fourth goal is enjoyment, which McMullin notes is subjective in nature and "can accommodate a wide variety of idiosyncratic preferences that many individuals would not necessarily count as positive" (2019: 28). McMullin consequently accepts that Hursthouse's account can maintain an element of individuality (2019: 29).

However, McMullin raises further concerns with naturalistic theories that appeal to natural biological functioning, claiming "they have a difficult time answering how nature gets its normative grip on us" (2019: 29). She questions why we ought pursue the ends established by nature, and argues such theories often take for granted "the idea that it is *good* to realise such a human nature" (2018: 29). For example, Foot determines that virtue expresses the optimal natural conditions for humans as defined by the characteristics of the species, but, as can be observed through the life forms of other species, natural behaviour is inherently amoral, so her account seems to lack justification as to why it is morally good to pursue virtuous behaviour.

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[18] And future discussion will demonstrate, a level of subjective enjoyment is a necessary component of individual flourishing.
[19] For the sake of brevity, a detailed discussion will not be engaged with here. However, they are fully laid out by Hursthouse (1999: 197-202).

To further this argument, she also questions how we decide what is considered characteristically human behaviour, raising the point that philosophers of gender, race, and disability have established that "the notion of 'normal' functioning is rarely neutral but has tended to marginalise significant portions of the human population" (2019: 29). This may be observed in Foot's idea of 'natural necessities' in which it appears she establishes that it is easier for neurotypical, or 'able'[20], individuals to achieve natural goodness. Citing Williams (1972) McMullin also identifies that other practices that humans currently or have historically engaged with, such as killing for fun, destroying the environment, and making fire are not considered 'distinctively and characteristically human' or recognised as natural behaviours despite their prevalence within historical and cultural practise. Therefore, Foot's conditions of human natural goodness seem arbitrarily determined.

McMullin takes an equally critical stance on purely subjectivist naturalistic virtue theories, such theories often define natural goodness in terms of individual happiness: "what is good for people – what counts as their flourishing – is what they decide or believe it is" (2019: 23). She argues that whilst they can accommodate first person desires, and capture the plurality of ways in which we can live a good life, they "collapse into mere ungrounded preference and so run afoul of our intuitions regarding the objectivity and publicity of claims about what counts as a genuinely good human life" (2019: 24). They face the opposite problem to objective accounts of natural flourishing in that they can be seen to justify practices viewed as objectively unhealthy, like alcoholism or drug abuse, provided the individual claims they experience happiness whilst engaging in them. This subsequently triggers the intuition that there should in fact be *some* socially determined standards of individual flourishing.

These observations inform McMullin's central claim that "there is no single normative perspective through which we understand and manage our relationship to self, other, and world", there is in fact "an irreducible normative plurality of perspective that we can adopt on the world" (2019: 3). She argues the dichotomous approach of emphasising either *being* good (object flourishing) or *feeling* good (subjective flourishing) misses the fact that people strive for both, and as such they exist in complex unity (2019: 31).

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[20] Observable in Foot's comments that lacking speech makes it harder to achieve natural goodness.

McMullin accommodates this perspective in her own conception of natural goodness by first identifying that humans engage with three distinct normative domains that together characterise their being in the world "all of which provide different reasons for action and belief and none of which is fully reducible to the others" (2019: 37). These are the first-person perspective, which contains the agents' own desires, interests, projects, including "the fundamental project of being an agent at all" (2019: 37). The second-person perspective, in which the agent recognises themselves as being "claimed by other persons" (2019: 37), they realise that they have a responsibility for, and are motivated by, others. Finally, the third-person perspective in which the agent "is claimed by the membership in the human community and its intersubjective projects aimed at establishing and understanding a shared world" (2019: 37)[21],[22].

McMullin then characterises natural goodness as recognising the 'fundamental and irresolvable' tension between these domains, and successfully navigating the demand of each to achieve "a kind of proportionality – a fragile and shifting balance - between the different normative terrains" (2019: 4). McMullin identifies the balance necessary for natural goodness is achieved through the successful execution of practical rationality (2019: 35)[23], and the unique challenges posed within each domain are met by virtue (2019: 69)[24].

Overall, McMullin's account of natural goodness can be seen as a development from Foot's as McMullin's retains the capacity to recognise the animal-nature component of natural

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[21] McMullin uses the example of a walking through a city and witnessing a man selling homemade plastic crafts to illustrate the competing demands of each domain (2019: 3). She identifies one may be compelled towards him in his poverty and enterprise, however selfishly motivated through the desire to use the money to satisfy oneself instead. The agent may also believe the endless consumption of useless plastic products, and the reliance on individual charity to resolve poverty issues (rather than a more substantial structural solution), are not conducive to the development of a world that meets everyone's needs (2019: 4). McMullin recognises each consideration has influence over their decision and notes that there is no clear hierarchy among these influences (2019: 4).

[22] This somewhat resembles Slote's recognition that virtue requires balance between self, intimate, and humanitarian caring (2001: 66).

[23] Here, McMullin also presents an understanding of practical rationality, or 'practical reason', developed beyond Foot's conception. Whereas Foot conceives of it as an "explicit cognitive activity of judgement formation and application", McMullin understands it as a "pre-theoretical normative attunement to the world – an implicit understanding of one's possibility in terms of conditions of success and failure, good and bad responses to the reason that claims us" (2019: 35). The difference between the two accounts shall be discussed in Section 4.3.

[24] McMullin's conception of virtue will be developed in Section 4.3.

goodness but introduces and accommodates for further considerations that more comprehensively characterise natural living, which creates a more nuanced account and improves the capacity for individual natural goodness.

Within this, it is important to note that McMullin's approach to natural goodness can accommodate the further features of living naturally identified in the previous section. It can accommodate contextual living by recognising it has a determining effect on all three normative domains. For example, an individual's context informs the nature of the community they engage with, which in turn determines the intersubjective projects and collective understanding of that group[25]. This also influences the goals, desires, and projects of both the individual and community members which affects the individuals first and second-person perspectives and commitments. The natural state of belonging to an epistemic community can similarly be accommodated within McMullin's account of natural goodness, as the responsibilities that arise from this belonging constitute considerations for the interpersonal second-person and intergroups third-person domains.

Finally, it may be arguable that McMullin's account can accommodate *any* further identified considerations that inform our understanding of living naturally as her account is structured in a way that recognises all possible ways for humans to naturally be in and engage with the world, so any further considerations are likely these will fall within these. More work would be required to test this claim as the current considerations that have been presented to extend the account of natural goodness by no means constitute an exhaustive list. However, for the purposes of the current discussion, given that McMullin's account provides a more developed account that is capable of accommodating the previously identified considerations that extend the account of natural human functioning, it is suitable to use McMullin's account as the new standard of natural goodness from which to examine the question 'what about this cluster of attitudes makes it virtuous'?

4 Attitude Virtue and the Updated Formulation of Natural Goodness

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[25] It is also worth noting here that the third person domain can also accommodate the fact that membership of a community goes beyond the individual's immediate contextual community and also applies to a wider human community, so individuals can also recognise commitments to other contexts.

This section will now discuss how Attitude Virtue can instantiate this developed understanding of natural goodness. An exploration of this shall benefit from a brief summary of the developments to the idea of natural goodness that were identified in the previous section, as this will clearly define the parameters of the new understanding of natural goodness that must be met by Attitude Virtue.

First, the recognition that it is natural for individuals to develop and exist in varied contexts, and the subsequent variation in individual commitments that arise because of this demonstrates the plurality of ways in which it is possible for individuals to lead naturally good lives. Second, the recognition that humans also exist as part of an epistemic community demonstrates that a natural life contains multiple different commitments, and we naturally live in multiple different normative domains. Finally, it is also necessary to establish whether Attitude Virtue can fit the role McMullin establishes for virtue — as 'problem solvers' that facilitate balance — as this is the characteristic of the virtues that she identifies that entails they can lead to her understanding of natural goodness.

The following section shall explore Attitude Virtue's capacity to instantiate each of these features in turn, and demonstrate it is capable of accounting for each of them. It will conclude by explaining how its capacity to account for each of these extended features resolves the question of 'what about clusters of attitudes makes them virtuous?'

4.1 Plurality

Attitude Virtue is capable of providing an account of virtue that recognises the plurality of ways in which it is possible for individuals to lead naturally good lives through its recognition that individual virtue consists of a cluster of contextually developed attitudes.

Discussion in Section 2.3.1 of this chapter determined that attitudes are contextually developed, given that Attitude Virtue attempts to develop an account of virtue from a psychologically realistic account of attitudes, this implies that Attitude Virtue accepts that the individual's virtuous attitudes are also contextually developed[26]. An account of virtue that recognises it is contextually developed can accommodate the plurality of ways in which humans live naturally as it recognises each unique contextually determined expression of

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[26] Webber's discussion of courage, discussed later in this section, also confirms that within Attitude Virtue, virtuous attitudes are contextually developed.

virtue could lead to natural flourishing, therefore recognising that a multitude of different ways of living naturally can be considered naturally good.

However, discussion in Chapter 6 Section 3.3.3 identified flaws in character trait-based virtue theories that attempt to formulate a contextual account of virtue in response to the problem of motivation interference, and it is possible these problems could translate over to Attitude Virtue[27]. Therefore, before it can be concluded that Attitude Virtue can successfully account for the plurality of ways in which it is possible for humans to lead good natural lives, the theoretical consistency of a contextually limited account of virtue must be examined[28].

To recap, when character trait-based virtue theories attempted to commit to a limited contextually-defined account of virtue in response to the problem of motivation interference, problems of meaninglessness and valuelessness in virtue arose. Accepting a contextual account of virtue entailed that the content of each virtue was defined by context, which meant the virtues are meaningless concepts when taken on their own. Furthermore, contextually defining virtue entailed the value of virtuous behaviour becomes contingent on the context that defines it, entailing the virtues have no independent value[29]. This also subsequently entails the value of contextual virtue cannot be established, as there is no independent justification as to why it is valuable. In committing to a contextually contingent account of virtue, the justification for natural goodness now also becomes circular as natural goodness is now defined in terms of contextual virtue, and contextual virtue defines natural

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[27] In the previous chapter contextuality was discussed in regard to physical disgust motivation interference producing a limitation manifestation of virtue unique to the individual, whereas here, contextuality is being discussed in regard to the development of virtue that is limited and unique to the individual. However, given that both instances of contextuality have the same effect on virtue — necessitating a commitment to an account of virtue defined by features of their context — an account of virtue limited by contextual development could be seen to produce similar problems to those identified for an account of contextual virtue induced by motivation interference.

[28] Given that this discussion could be seen as an instrumental component in the resolution of the problems raised by motivation interference, as it explains how Attitude Virtue can provide a consistent account of limited virtue, it might be deemed more necessary to be engaged with later on in the discussion of the problem. However, it is also necessary for the question at hand, as it does not make sense to advance a reformulation of virtue that can be identified as theoretically flawed from the get-go, so it will be discussed here. How exactly this solves the problem of motivation interference will then be discussed later on in Chapter 8 Section 4.3.

[29] The example provided identified that bravery in war had no value as bravery in a context that required courage in the face of a terminal diagnosis.

goodness. So, there is no way of independently justifying the value of natural goodness, or providing a compelling reason for why virtuous behaviour is valuable.

Attitude Virtue can avoid these problems as it structures virtue differently to character trait-based virtue theories. Whereas context comes to define virtue in character trait-based virtue theories that commit to a limited account, for Attitude Virtue, context determines the attitudes that instantiate partial representations of virtue. Within this, virtues can retain 'universal' characteristics as the partial representations of them displayed through contextually unique attitudes can be united by a general unspecific description.

This is best demonstrated through Webber's discussion of courage. He identifies that in war zones, courage requires the appropriate attitude to violence and threat, in wild territories courage requires appropriate attitudes to local wildlife and extreme climate, and for those in peaceful and secure environments courage requires appropriate attitudes towards personal and professional risks (2020: 12). He then identifies that these attitudes are "unified by a general attitude towards the importance of one's own safety and wellbeing in relation to others" (2020: 12). This clearly exemplifies that individuals develop specific virtuous attitudes that are determined by their particular contextual development, but these attitudes can be connected to one another through a general understanding of bravery.

A different way of understanding this is through Webber's resolution metaphor, he states: "The language of virtues specifies complex motivational states in fairly low-resolution. Zoom in for a higher-resolution image that presents the set of attitudes that comprises the virtue, with associations of varying strengths between these attitudes" (2020: 12). The non-specific 'low-resolution' definition of courage presents a generalised simplification of the characteristics of courageous behaviour, 'zoom-in' on a particular instance of courage and unique attitudes that instantiate courage will provide a more detailed picture of what it means to be courageous in that context.

This high- and low-resolution metaphor can be used to explain how Attitude Virtue can avoid the value issue. The low-resolution or 'universal' understanding of virtue can be understood to fulfil the overall role McMullin attributed to virtue in that they 'solve problems' presented by engagement with different normative domains and balance the

demands of living in the world. Their value can therefore be understood to come from the fact that by doing this, they lead the individual to natural goodness. Examining virtue at a higher resolution reveals the virtue displayed through contextually determined clusters of attitudes only displays an aspect of this overall virtue, but it can be considered valuable because it is an expression of the overall (valuable) virtue, and it is an expression that is necessary for them to live well in their specific context.

Regarding the definitional issue it can be understood that the 'universal' low-resolution understanding of virtue provides a stable and consistent definition of virtue, one which individuals use as a template to inform the development of virtuous attitudes within their context. Discussion in the previous paragraph identified that within context displays of virtue through clusters of attitudes are understood to be a partial representation of the virtue, so these instantiations can therefore be understood to constitute partial definition of each virtue. Any conflicting definitions can be attributed to them being imperfect representations of the actual virtue. Therefore, within Attitude Virtue, the definition of virtues remains consistent, it is how they are instantiated through attitudes that changes with context.

Understanding virtue in this way also avoids the circularity problem. Whilst Attitude Virtue accepts contextually defined virtue leads to individual flourishing, this is understood as a *sufficiency* condition to reflect the psychological reality of the individual's capacity for natural goodness. It is establishing a threshold at which it is possible to claim the individual has displayed enough virtue and not claiming the individual is displaying full or perfect virtue. Therefore, Attitude Virtue has not redefined the conditions for natural goodness in line with individual context, and natural goodness retains the independent definition and justification McMullin establishes for it through the universal understanding. The display of contextually virtuous behaviours is valued through its approximation of this independently justified standard of natural goodness, thus breaking the circularity.

Finally, this explanation of how Attitude Virtue can account for the plurality of ways in which it is possible for individuals to live good natural lives has established that Attitude Virtue commits to a contextual and therefore technically 'limited' account of virtue. Discussion in Sections 3.3.1 and 3.3.2.1 of the previous chapter determined that Naturalistic Virtue Theories that commit to a limited account of virtue must also commit to developing their

virtue, and because Attitude Virtue adopts a naturalistic foundation, this consequently entails Attitude Virtue must also commit to a developmental account.

As the psychological reality of attitudes demonstrates it is only possible for individuals to display part of a virtue through contextually developed clusters of attitudes, this can be viewed as a natural limitation to virtue and thus fulfils the conditions for being an appropriate virtue-limitation for Annas's developmental account established in Chapter 6 Section 2.1.1. Section 2.3.2 of this chapter also determined that Attitude Virtue was capable of adopting a development account, so, Attitude Virtue is capable of adopting Annas' approach to resolve the problem[30].

Overall, discussion has provided sufficient evidence that Attitude Virtue can formulate a theoretically consistent account of contextual virtue which means it can successfully account for the plurality of ways in which it is possible to lead a natural life[31].

4.2 Domains

Attitude Virtue can also accommodate the fact that we naturally live in different normative domains, by including domain specific attitudes within clusters of virtue.

Webber identified that not only do we live in an interpersonal domain that requires a certain set of behaviours for good natural living, but we are also part of an epistemic community which comes with a different set of commitments and requirements for naturally good living. As individual virtues consist of clusters of attitudes, the cluster of

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[30] Discussion would benefit from an exploration of how virtuous development is instantiated in regard to contextually developed virtue, as this would provide further evidence for Attitude Virtue's compatibility with development. However, demonstrating compatibility with a developmental account is sufficient for completing the final step in establishing Attitude Virtue can provide a theoretically consistent account of virtue that accommodates the plurality of way in which individuals can lead naturally good lives, and given that virtue limitation induced by not contextual development is not a disgust-specific issue, development in relation to this form of limitation shall not be discussed any further here.

[31] Beyond providing the groundwork for solving the problem of motivation interference (as recognised in footnote 24) this discussion also provides information relevant for explaining the difference between character trait-based virtue and attitude virtue to draw out the specific problem with character trait-based virtue theories. However, this is best situated in the discussion of the problem of motivation interference as it also provides further clarity to how attitude virtue solves the problem, so it will be discussed there.

attitudes that inform each virtue can contain both attitudes towards interpersonal responsibility, and attitudes towards their broader responsibility as part of a community.

Returning to the honesty example, the individual may hold a collection of attitudes that inform their interpersonal virtuous honesty, such as the attitudes that lying, cheating, and stealing are bad, but sometimes, in a specific set of circumstances, it is acceptable to lie to one's friends to save their feelings. Within their cluster of attitudes that inform virtuous honesty there may also be a collection of attitudes that informs honesty in an epistemic community, and this may hold a different perspective on honesty that is appropriate for this domain. For example, they may for example hold that, for the good of the epistemic community and thus the successful functioning of human society, certain situations necessarily required the truth regardless of the interpersonal effects this truth might have, consequently engendering a stricter conception of honesty in this domain. Therefore, both sets of attitudes can exist as virtues, showing that Attitude Virtue can accommodate for the different domains of natural living.

4.3 Problem Solving and Balance

Finally, to determine compatibility between Attitude Virtue and McMullin's account of natural goodness (which can account for all these extended features of natural living), it must be established that Attitude Virtue can embody the characteristic McMullin ascribes to virtue that enable them to instantiate her understanding of natural goodness.

McMullin defines Virtue as "excellent character traits comprised of a set of interrelated beliefs, affective orientations, perceptual dispositions, and behaviour tendencies, all of which conduce to and are constitutive of an excellent human life" (2019: 68). For McMullin, virtues facilitate natural goodness as they are capable of responding to and balancing the demands that arise within the three normative domains of being in the world. She therefore characterises virtues as "as ordered stances through which we are responsive to this plurality of reasons" (2019: 68).

She expands that individual's face a plethora of 'existential problems' that arise as a result of "inalienable features of the human condition", providing examples of problems such as "the fact of mortality and temporal finitude, the conditions of material scarcity in which we typically operate, the hierarchical structures of social life, innate limitations of strength and

ability, and the temptations posed by desire for bodily pleasure and aversion to pain" (2019: 69). She then identifies that the virtues can be individuated as each they function as 'problem solvers' for individual existential problems. For example, temperance or moderation may be employed to solve the problem of the desire for bodily pleasure.

Whilst a clear difference exists between Attitude Virtue and McMullin's virtue in that Attitude Virtue does not define virtue in terms of character traits, Section 2.2 of this chapter provided sufficient evidence from Webber and Tanesini to justify how Attitude Virtue was capable of instantiating the features of virtue displayed by character traits through attitudes. Comparing the description of virtuous attitudes established in Section 2.2 to McMullin's description of virtue also establishes that both characterisations share the same features. Section 2.2 identified that virtuous attitudes contained multiple attitudes (interrelated beliefs), that can inform emotional responses, opinions, and judgements (affective orientations and perceptual disposition), and motivate actions (behaviour tendencies). Similarity between McMullin's account of virtue and Attitude Virtue is promising for compatibility as it shows they possess the same components, which should help them fulfil the same function.

Without changing any characteristics of Attitude Virtue, it is also possible to re-conceptualise the role of virtuous attitudes in line with McMullin's understanding of virtue, determining that virtuous attitudes develop to resolve existential problems. Individual attitudes within virtue clusters engage with concrete manifestation of the existential problem that specific virtue cluster engages with. For example, an individual's wary attitude towards overusing alcohol informs part of their temperate response towards the existential problem of temptation posed by desire for bodily pleasure. The cluster of attitudes attached to each virtue can therefore be understood to be the overall manifestation of that 'problem solver' within the individual[32].

Furthermore, considerations of value can be implemented during the development of attitudes, so considerations of balance can be made whilst the individual is making virtuous

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[32]Given the established function of virtuous social disgust — responding to displays of unvirtuous character traits — it might be best understood as a virtue regulator, and therefore functions to solve the problem of virtue adherence — so individuals can more consistently solve their, and other people's, epistemic problems.

decisions. For example, whilst developing virtuous attitudes, the individual may develop a specific sense of value for each attitude within a cluster, this establishes an understanding of the value of that specific part of the attitude in relation to others. Consequently, in a situation in which the individual has the choice of multiple different actions, this entails that individuals can compare attitude value and importance, and is capable of making judgments about which commitments are most valuable and necessary to pursue at that instance[33]. Finally, as discussion in Section 3.2.2.2 established that virtuous attitudes can contain attitudes that span all three normative domains, this also entails they are capable of balancing judgements across all three normative domains as well.

Similarly to McMullin's account, balance can also be achieved in Attitude Virtue through the utilisation of practical reason, however, Attitude Virtue's conception of practical reason differs from McMullin's in a way that can be considered more conducive to facilitating balance. To explain this, it will first be useful to recap McMullin and Foot's accounts of practical reason. As was established in Footnote 22 in this chapter, Foot describes practical reason as an "explicit cognitive activity of judgement formation and application", and McMullin understands it as a "pre-theoretical normative attunement to the world – an implicit understanding of one's possibility in terms of conditions of success and failure, good and bad responses to the reason that claims us" (2019: 35).

Foot's description appears to position practical reasoning as a purely explicit process, in which the individual reasons out every virtuous decision, whereas McMullin's positions it as an implicit process in which the individual intuits the appropriately virtuous response. Intuitively, moral decision making involves both implicit and explicit forms of reasoning. For example, clear cut or everyday moral issues may be responded to with implicit reasoning, whereas infrequent or complex moral issues may require explicit reasoning to determine the appropriately virtuous course of action. So, it appears neither Foot or McMullin's accounts of practical reasoning captures the true nature of moral reasoning as it appears to require both implicit and explicit reasoning.

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[33] This can also be understood in terms of attitude strength — those attitudes the individual values the most are likely to be well-developed strong attitudes that are highly influential on the individual's cognition, and those that are less valuable are likely to be less well-developed, weaker attitudes, that have less influence over the individual's cognition.

Neither Tanesini nor Webber provide an account of practical reason from an Attitude Virtue perspective, but it is possible to use the established theory to speculate upon what this may look like. Once this has been established, it will be identified that this proposed account of practical reason is capable of accommodating both implicit and explicit reasoning.

Within attitude psychology, reasoning can occur to trigger an attitude. For example, when an individual witnesses someone cheating at a game, they may identify that this indicates dishonesty and thus respond with a negative attitude. It could therefore be argued that it is at this point the individual engages in practical reasoning. Attitude psychology has identified that individuals possess attitudes at varying accessibilities which, alongside attitude strength, determines the likelihood the attitude will influence an individual's cognition on a particular occasion. Highly accessible attitudes may not require explicit reasoning to activate given the speed at which they respond to stimuli and enter cognition and may therefore present instances of 'implicit' moral reasoning. Also, because attitude accessibility is increased through the repeated activation and subsequent habituation of attitudes[34], it is likely such highly accessible attitudes pertain to moral instance the individual frequently engages with. Whereas attitudes with low accessibility may be accompanied by more explicit consideration of the stimuli as the attitude takes longer to be brought to bear in cognition. Low accessibility is the product of less frequent activation, and as such, the content of these attitudes may relate to more niche moral decisions.

The mechanics of attitude psychology therefore appear to suggest a structure to practical reasoning within Attitude Virtue that resembles the one speculated to represent the psychological reality of moral reasoning. With highly accessible attitudes likely not requiring explicit reasoning to activate and likely pertaining to more common, frequently occurring moral decisions, and lower accessibility attitudes likely being accompanied by more explicit reasoning and likely pertaining to less common, infrequently occurring moral decisions. As it has been identified low accessibility attitudes are likely to engage with less common moral decisions, the presence of explicit reasoning is useful in such situations as it facilitates a deliberate assessment of the situation, so the individual can be sure in their moral decision making.

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[34] Evidenced by Webber in his discussion of Axsom and Cooper's experiments (2013: 1088).

Overall, this formulation of practical reasoning better facilitates balance as, unlike Foot and McMullin who appear to be committing to either a purely explicit or implicit form of practical reasoning, it enables individuals to respond appropriately to the type of moral decision they are engaging with. Highly accessible attitudes enable the individual to respond quickly and effectively to everyday moral decisions, meaning they have more time and cognitive capacity to deliberate on rare or complicated moral situations, thus enabling the individual to balance their engagement with problems that may arise across domains. The presence of explicit reasoning in low accessibility attitudes also enables the individual to deliberate upon how to balance their commitments if they are forced to make a choice between multiple commitments. It may also be assumed that individuals intuitively know how to balance commitments which they have highly accessible attitudes towards given their level of familiarity with the attitudes, they implicitly understand the value and importance of these in relation to others[35].

Therefore, as Attitude Virtue's instantiation of the role McMullin attributes to virtue can occur without any change to Attitude virtue, and balance can be achieved through the cultivation of attitude value (or 'attitude strength'), and practical reason, Attitude Virtue can therefore be seen to fulfil the role of problem-solvers and balancer that McMullin attributes to virtue, which also entails that they can successfully lead to McMullin's understanding of natural goodness.

4.4 Why are Clusters of Attitudes Considered Virtues?

Overall, the question of 'what is it about clusters of attitudes that make them virtuous?' can now be answered. Discussion has revealed Attitude Virtue has the capacity to provide an operable, theoretically consistent account of virtue that accommodates an up-to-date psychologically realistic account of natural goodness and embodies McMullin's understanding of naturally good virtue. It therefore provides an accurate and honest

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[35] It is also worth noting that attitude accessibility and attitude value (or attitude strength) exert simultaneous influence on the individual's balancing of commitments. For example, a highly valued, low accessibility attitude (for an attitude that the individual holds as important but does not express very often) may overrule a highly accessible but not as highly valued attitude in an instance in which the individual has to choose between these commitments.

interpretation of what it means to naturally flourish, which is sufficient to argue that clusters of attitudes are virtuous when they facilitate this natural flourishing.

5 Conclusion

This chapter began by presenting Webber and Tanesini's understanding of attitude psychology, and then explained their arguments for how virtue can be adequately instantiated through clusters of attitudes. It then discussed Attitudes Virtue's compatibility with thesis specific concepts, identifying that clusters of attitudes can be understood to be the underlying meaning structures of cognition, and that the development of attitudes resembles the development of virtue.

Once this was established, it was then determined that restructuring virtue in line with attitudes necessitated a reconceptualization of natural goodness, as the psychological reality of the behaviour of attitudes identified features of living naturally not recognised by Foot's account. McMullin's work was then used to extend this criticism of Foot and, using McMullin's phenomenological account, present a new formulation of natural goodness that can accommodate these further considerations. The chapter concluded by identifying how Attitude Virtue was able to instantiate this new understanding of natural goodness and therefore accommodate the extended considerations of living naturally. As a result, the chapter explained why and when clusters of attitudes can be considered virtuous.

As this chapter has proved that Attitude Virtue presents a viable alternative naturalistic virtue theory, and clarified the understanding of natural goodness from which it operates, it is now possible for the following chapter to examine how Attitude Virtue can respond to the problem of motivation interference.

Chapter Eight – Resolving the Problem of Motivation Interference Through Attitude Virtue

1 Introduction

Now that Attitude Virtue has been established as a viable alternative to character-trait based virtue, and new conditions for natural goodness — which Attitude Virtue has also been proven to successfully instantiate — have been elaborated. It is now possible to assess whether Attitude Virtue can resolve the problem of motivation posed by disgust.

Given that Attitude Virtue presents a different formulation of virtue to character trait-based theories, the chapter will begin by establishing that the two identified manifestations of motivation interference — when physical disgust overrides behaviour and when it influences judgements — could be seen to instigate the same practical and metaethical problems for Attitude Virtue as they did for character trait-based virtue theories.

The chapter will then proceed to examine Attitude Virtue's response to the practical problem. It will determine that it can adopt the same strategy to resolve this problem that character trait-based theories have utilised — recognising that physical disgust imposes a natural limit on the individual's capacity for virtue but recognising the individual can be considered 'virtuous enough' provided they commit to developing virtue. Following this, Attitude Virtue's capacity to display perfectionist development will be examined and it will be identified that attitude psychology presents a further means of virtue development — it will be identified that the habituation of strong attitudes can generate virtues that are more resistant to the influence of physical disgust motivation interference.

Attitude Virtue's response to the metaethical problem will then be assessed, beginning with an examination of whether the previously identified developmental strategy — habituating strong attitudes and mitigating instances of motivation interference — presents a new way to conceptualise virtue which can resolve the problem. Several issues with this perspective will be identified, and it will then be established that Attitude Virtue can provide a more effective response by recognising that so long as the individual possesses sufficiently strong contextually appropriate attitudes, they can be considered sufficiently virtuous. This is accompanied by the recognition that physical disgust will sometimes interfere with virtue, so Attitude Virtue is committing to a limited developmental approach, but limited virtue can again be justified by the virtue of perfectionism.

A worry that arises from this commitment to a limited developmental account of virtue is that the same problems of valuelessness, meaninglessness, and circularity in virtue and natural goodness will arise for Attitude Virtue in the same way that they did for character trait-based virtue theories. However, discussion will explain how these problems are avoided through Attitude Virtue's recognition that virtuous attitudes instantiate universally understood virtues. The chapter will conclude by examining why Attitude Virtue can resolve the problems that arise as a result of committing to a limited account of virtue and character trait-based virtue cannot. It will determine that the difference lies in structure, as attitude virtue structures virtue in a way that can accommodate a psychologically realistic understanding of virtue and a 'complete' understanding of virtue.

2 Re-establishing the Problems for Attitude Virtue

Chapter 5 Sections 2.1.1 and 2.1.2 determined that the problem of motivation interference was identified to manifest in two ways: In fulfilment of its poison and parasite function, physical disgust regularly overrode cognition in instances that required virtuous behaviour, and physical disgust was identified to regularly interfere with moral reasoning when its elicitor is also the object of evaluation in moral judgements. Before Attitude Virtue's response to the problems can be established, motivation interference's effect on virtuous attitudes will be briefly examined to determine that these problems can manifest in the same way as before.

Regarding the first identified form of motivation interference, given that this occurs as a result of physical disgust completely overriding cognition, it can be said to have the same effect on attitude as character — providing an external influence that inhibits the individual from displaying an appropriately virtuous attitude, thus causing behavioural interference.

Concerning the second form of motivation interference, Section 2.1.2 of Chapter 5 determined that physical disgust interfered with moral judgement because of its negative affective experience influencing the individual's evaluation of the situation — negatively affecting their reasoning to produce harsher action. Given that these experiments determined a general effect on moral cognition, and given that Section 2.2 of the previous chapter identified that virtuous attitudes possess a similar reason-responsivity to situational factors as character-trait based virtue, these experiments can be understood in context of

Attitude Virtue as physical disgust inhibiting the display of appropriately virtuous attitudes by interfering with appropriately virtuous reasoning and action that express them, which demonstrates that the effect on virtue manifests in the same way as it does for character trait-based virtue. Finally, given that the conditions for the frequency of motivation interference remain the same[1], physical disgust can be said to regularly interfere with the display of virtuous attitudes, so the problem exists in the same form as before.

Therefore, the same practical problem that physical disgust poses for character trait-based virtue can be seen to manifest for Attitude Virtue — the nature of disgust inhibits the individual from behaving consistently virtuously. Similarly, given that this also demonstrates that the individual does not possess the stability of disposition to instantiate consistently virtuous attitudes (the assumed conditions for natural goodness), it might also be said that the attitude-based conception of Naturalistic Virtue presents a psychologically unrealistic account of natural goodness, so virtuous attitudes cannot define natural goodness, meaning similar metaethical problems arise.

3 Attitude Virtue's Resolution of the Practical Problem

An operable strategy for character trait-based Naturalistic Virtue Theories to resolve the practical problem caused by motivation interference has already been presented in Chapter 6 Sections 2.1.1 and 2.1.2. This involves the Naturalistic Virtue Theories adopting Annas' developmental account which acknowledged natural limitations on the individual's capacity for virtue — physical disgust motivation interference being integrated as one of these — and accepting that individuals can be considered 'virtuous enough' provided they possess the *drive to aspire* — the motivation to progress their understanding and develop it beyond their current capacity.

As Section 2.3.2 of the previous chapter established that Attitude Virtue is compatible with developmental virtue, it seems equally capable of resolving the problem in a similar way — recognising physical disgust as a natural limit to virtue but recognising that individuals can be virtuous enough, provided they strive to develop their virtuous attitudes.

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[1] And the same point can be raised that there exists an identifiable group of instances in which physical disgust can interfere with the display of virtuous attitudes, which demonstrates inconsistency in virtue in a different way.

Given that an adequate resolution to the problem has been identified, its conditions elaborated upon in Chapter 6 Sections 2.1.1 and 2.1.2, and its compatibility with Attitude Virtue has been established, this chapter will not engage any further with how it solves the problem. It will however now elaborate on the conditions for appropriately perfectionist virtuous development in regard to Attitude Virtue and motivation interference, as attitude psychology introduces further considerations for the development of virtue, ones that are also relevant for the coming metaethical discussion, so it will be useful to elaborate these beforehand.

3.1 Developing Virtuous Attitudes in Response to Motivation Interference — Exposure Therapy and Habituation

A means of perfectionist development through elicitor exposure therapy has already been suggested for character trait-based virtue in Chapter 6 Section 3.3.2.2. In this, the virtuous agent considers their relationship with knowable and unknowable instances of motivation interference and repeatedly exposes themself to those instances of motivation interference likely to interfere with their capacity for virtue. It is entirely possible for Attitude Virtue to accept such a developmental strategy, and compatibility between this strategy and Attitude Virtue needs little elaboration as the virtuous individual would follow the same process as before - recognising where a physical disgust occurs as the object of evaluation in moral judgements to interfere with virtuous attitudes and mitigating those instances perfectionist considerations identify as most appropriate to address. So, by using the same strategy as before, Attitude Virtue can mitigate physical disgust's effect on virtue in a way that expresses appropriate perfectionism, which previous discussion has identified constitutes 'virtuous enough' behaviour.

However, Attitude Virtue also presents another avenue of virtue development through attitude habituation. Section 2.3.2 of the previous Chapter identified that the repeated activation of an attitude increased its strength and accessibility, meaning it is quicker to enter cognition and has a more enduring effect on cognition once activated. If the individual were to frequently activate those virtuous attitudes that are affected by the disgust reactions identified as the target of development by perfectionist considerations, then when motivation interference does occur, physical disgust would still have an effect on the virtuous attitude proportional to the intensity of its reaction, but the virtuous attitudes

themselves would be stronger and more accessible, meaning the virtue would be less affected by physical disgust. Attitude habituation therefore presents another means improving the individual's capacity for virtue in the fact of motivation interference[2].

When taken together, exposure therapy and attitude habituation can be seen to have a complimentary effect on motivation interference mitigation as exposure therapy reduces the intensity of the interfering physical disgust reaction, thus decreasing the cognitive interference that may slow attitude accessibility down, and attitude habituation strengthens the virtuous attitude it is interfering with so physical disgust has a lesser effect on virtue.

From this, the habituation of strong virtuous attitudes affected by disgust might now also be seen as a necessary component in motivation interference mitigation, as whilst exposure therapy effectively addresses the intensity of the specific instance of problematic disgust, without habitation, the underlying virtue remains vulnerable to motivation interference. Virtue habituation therefore provides the necessary development to possess strong virtue in the face of motivation interference, and when it is coupled with the exposure therapy, it produces an effective and robust strategy of motivation interference mitigation[3].

How this produces successful development in Attitude Virtue can be demonstrated in the following example. To overcome physically disgusting evidence causing motivation interference and inhibiting the capacity to give fair trial, this method of virtue development requires the judge and jury to review previous cases in which a physical disgust elicitor occurred as the object of evaluation, and, for them to extensively review any relevant physically disgusting evidence pre-trial. The repeated exposure to the physical disgust elicitors included in the trial will reduce the effect of motivation interference when giving trial, and reviewing previous cases with motivation interference allows them to experience the effects of motivation interference on judgement, deliberate upon a more appropriate course of action, and habituate appropriate attitudes such as fairness to allow them to give

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[2]Such a developmental strategy — in which the individual practices their virtuous responses identified to be the target of development — also seems available for adoption by character trait-based virtue theories. However, this does not matter for problem resolution as the issue is identified to exist outside of their capacity to implement an appropriate developmental strategy.

[3] This can also be seen to have a beneficial effect on virtue outside the problem of motivation interference, as the individual is actively developing strong attitudes.

fair trial[4]. Therefore, when it comes to trial they would experience less physical disgust toward the evidence, meaning less intense motivation interference, and their attitudes appropriate for fair trial would be strong and highly accessible, so individuals would be able to deliberate appropriately with potentially only minor physical disgust motivation interference.

Finally, this strategy can be seen to provide an effective solution to both manifestations of motivation interference — when disgust both overrides behaviour and influences judgements — as the same principles can be enacted in the mitigation of each manifestation. The individual can identify the relevant instances of motivation interference (be it overriding behaviour or influencing behaviour), mitigate the disgust, and strengthen the attitude[5]. Therefore, through the implementation of this developmental strategy, individuals can be considered 'virtuous enough' to be practically virtuous.

4 Attitude Virtue's Engagement with the Metaethical Problem

This section will now engage with Attitude Virtue's response to the metaethical aspect of the problem of motivation interference. It will begin by considering whether this newly proposed developmental account can provide a sufficient response to the problem given that it suggests individuals are capable of sufficiently overcoming motivation interference. However, four problems can be identified with this: it interferes with the appropriate interactions between virtuous attitudes, it interferes with the effective operation of practical reasoning, it is not certain that such development is psychologically possible, and it appears to contradict the naturalistic principles.

The following section will then determine that Attitude Virtue can in fact just maintain the established definition of virtue, recognise that motivation interference occurs as a natural

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[4] It is likely the judge would already have some appropriate development in this regard, as work on previous cases uninhibited by disgust could have habituated appropriately virtuous attitudes, and it is possible they may have experienced cases involving motivation interference before.

[5] It is worth noting that in some instances, behaviour-based physical disgust motivation interference and judgement-based physical disgust motivation interference might coalesce. For example, the individual might have to make a moral judgement concerning the physical disgust elicitor they also have to behave morally appropriately around. However, some instances may be separate, and to instantiate appropriate development, the individual must be mindful of and develop appropriately in regard to both.

limitation of virtue, and maintain that the individual can still be considered virtuous provided they meet the established criteria. The implication of committing to such a view will be considered, including the necessity to commit to a limited, developmental account of virtue and the need to justify this limited account through the virtue of perfectionism — which in turn motivates a re-examination of virtuous perfectionism in light of the previous discussion —and it will be concluded that this provides a coherent psychologically realistic account of virtue.

4.1 Response One – Developing Multiple Strong Attitudes

Given the potential efficacy of the improved developmental strategy presented in Section 3.1, it might be taken that this presents a picture of virtue that is sufficient to overcome motivation. From this, a potential means of resolving the metaethical problem may be to redefine virtue in a way that accommodates this motivation interference mitigation, so motivation interference is no longer a problem. For example, virtue can now be naturalistically defined as having context appropriate attitudes, and holding them sufficiently strongly enough so that disgust cannot override behaviour or influence behaviour when its elicitor occurs as the object of evaluation.

However, several problems can be identified with this proposed solution. First, it is not compatible with the mechanics of attitude relations necessary for virtue. The discussion of practical wisdom in relation to attitude's fulfilling the problem solving and balance function McMullin attributed to virtue in Section 4.3 of the previous chapter identified that attitudes were held at varying strengths, and this facilitated the capacity to respond appropriately in moral situations but also the capacity to reason appropriately in day-to-day life. For example: some attitudes must be strong given their importance in context-relevant moral decision making; whereas other attitudes that facilitate the resolution of context-relevant day-to-day problems that have less moral import can be held weaker.

If, as the solution suggests, many attitudes were well developed and held at a similar strength, then such attitudes would be likely to frequently enter cognition, and perhaps compete with other, more relevant, attitudes. This therefore has the capacity to interfere with the individual's ability to respond with context-appropriate virtue, which necessarily requires the expression of certain virtuous attitudes over others, which entails certain

attitudes should be stronger than others. On Attitude Virtue then, attitudes must possess the right balance of relative strengths, and certain attitudes must necessarily be held weakly enough to 'give way' to other attitudes that are more morally appropriate. Given this dynamic in which some attitudes are necessarily held at a weaker strength, this also entails such attitudes are vulnerable to motivation interference, but it transpires these are the necessary conditions for virtue.

Not only would the possession of strong attitudes disrupt the necessary disposition for contextually appropriate virtue, but it might also interfere with the individual's capacity to effectively employ practical reason as the presence of many strong attitudes may lead to the over-examination of simple moral decisions — those that should not require significant moral deliberation. For example, if the individual is faced with a simple moral decision but holds two strong attitudes that pertain to it, which suggests two different courses of action in response, they may spend significant time deliberating upon what to do, given the perceived importance of the decision engendered by the strength of the attitudes. Not only does this inhibit effective moral reasoning — as it entails the individual might spend significant time deliberating on multiple trivial moral problems for them to effectively engage with the world — but it may also be taken to entail that the individual is not giving significant or complicated moral situations the due consideration necessary for appropriately virtuous behaviour. Therefore, the engendering of multiple strong attitudes cannot resolve the problem as Attitude Virtue requires attitudes to possess the right balance of strengths and accessibilities to facilitate well-ordered practical reasoning.

Beyond being incompatible with mechanics of attitude relations necessary for virtue, it might not be possible to develop attitudes strongly or comprehensively enough to be entirely disgust resistant. For example, it may be possible for the individual to experience a disgust reaction so intense that it can override even the strongest attitude. Furthermore, in their considerations of perfectionist development, Section 3.3.2.1 of Chapter 6 and Section 3.1 of this chapter identified unknowable instances of motivation interference present epistemic problems for the effective mitigation of motivation interference as they inhibit the effective identification of those elicitors likely to interfere with virtue. Therefore, it is not certain that individuals will be able to identify and develop every instance of virtue necessary for comprehensive motivation interference mitigation, and also identify and

mitigate every instance of physical disgust necessary for comprehensive motivation interference mitigation[6]. If the comprehensive mitigation of motivation interference cannot be achieved, then the metaethical problem endures as it demonstrates this updated understanding of virtue is psychologically unrealistic so cannot define natural goodness.

Finally, the point can also be raised that the total mitigation of motivation interference is neither desirable nor naturalistically justifiable. Given that the physical disgust mechanism fulfils a vital poison and parasite avoidance function, the total mitigation of these for the sake of moral behaviour might be detrimental to the individual. As, in the process of ignoring an elicitor, they might overlook a significant poison or parasite threat and end up suffering serious physical side effects. So, the mitigation of motivation interference in such a way is not a desirable condition to be in. Also, to define Naturalistic Virtue as the possession of virtuous attitudes that are strong enough that they overcome physical disgust motivation interference is to present an account of virtue that is at odds with the natural situation the individual finds themself in — as virtue would require the mitigation of a natural function. It therefore does not seem a naturalistically justifiable formulation of virtue.

4.2 Response Two — Committing to a Limited Account of Virtuous Attitudes

Attitude Virtue can provide a more effective response to the metaethical problem by recognising the established definition of virtue — recognised as the possession of sufficiently strong contextually appropriate attitude — determines the conditions for sufficient virtue, and the individual can be judged virtuous provided they instantiate this, even when motivation interference occurs to inhibit virtue[7].

On this model, physical disgust's inhibition of virtue can be recognised as a naturalistically justifiable inhibition of virtue through its incorporation into the definition of natural goodness. McMullin's account of natural goodness — which the previous chapter established Attitude Virtue can instantiate — was adopted for its capacity to accommodate

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[6] The nature of physical disgust elicitation appears particularly problematic in this regard as it is possible an instance of false positive disgust could occur as the object of evaluation in an unexpected situation that the individual has neither mitigated the disgust nor strengthened the virtuous attitude, causing unexpected motivation interference.

[7] It is worth noting, the following discussion can pertain to both instances of motivation interference — behaviour and judgement interference — so it resolves both instances of the problem.

further features of natural living overlooked by Foot. Discussion has identified physical disgust motivation interference to be an unavoidable consequence of natural living, which entails it presents a further consideration about living naturally that can be integrated in McMullin's understanding of the conditions of Natural Goodness. This subsequently enables virtue limited by motivation interference to be considered naturally good.

Given that motivation interference's acceptable presence in virtuous attitudes entails the virtuous person does not always act virtuously, this also commits Attitude Virtue to a limited account of virtue and therefore necessarily requires Attitude Virtue also commit to a developmental account of virtue, which previous discussion in Sections 3 and 3.1 of this chapter, and 2.2 of the previous chapter have established it is capable of doing.

Previously, the justification for why a limited development account of virtue can instantiate Natural Goodness was presented through the virtue of perfection[8]. Whilst virtuous perfectionism can still provide justification for why a limited account of Attitude Virtue can facilitate Natural Goodness[9], the previous section introduced considerations that nuance virtuous perfectionism in relation to Attitude Virtue, so these further considerations will first be discussed to determine how perfectionism is instantiated in limited Attitude virtue.

Perfectionism was characterised by Swanton as "*being well disposed* with respect for striving for perfection" (2003: 207), and the previous understanding presented in Section 3.1 of this in relation to motivation interference determined this required the identification of relevant instances of motivation interference, the mitigation of the physical disgust reaction that induces it and the strengthening of the attitude that affects it. However, the previous section identified that an instantiation of this strategy with the habituation of multiple strong attitudes that are threatened by motivation interference, is not compatible with the necessary mechanism of Attitude Virtue. Attitude Virtue in fact requires that attitudes be possessed at various contextually appropriate strengths and accessibilities to facilitate the appropriate expression of virtue and employment of practical reason.

This consequently demonstrates that within Attitude Virtue the concept of 'developing virtue as far as possible without overreaching' is outmoded, as there is not a single ideal

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[8] This was established in Chapter 6 Section 3.3.2.1
[9] This will be elaborated upon shortly.

balance of attitude strength that the individual is developing toward, and the 'developmental ideal' is determined by ever-shifting contextual need that necessarily requires a balance of strong and weak attitudes. For example, the individual may habituate a strong attitude to overcome an instance of motivation interference, only to find it then interferes with their contextually appropriate instantiation of virtuous attitudes elsewhere.

Consequently, the conditions for appropriate development can be reconceptualised as the individual's self-critical reflection of their contextually specific developmental needs (that also take into account Swanton's considerations for perfectionism established in Chapter 6 Section 3.3.2.1) and subsequent manifestation of appropriate development in relation to this where possible. In a way, this is compatible with the previously determined strategy of identifying relevant instances of motivation interference and addressing them through exposure therapy and attitude habituation, it just redefines what 'relevant' instances of motivation interference are.

Understanding perfectionism in this way can still be seen to provide a naturalistic justification for limited virtue as this is still establishing the developmental conditions for the best possible realistic instantiation of natural goodness. It is now just tailored for the specific considerations for natural goodness introduced by Attitude Virtue. Within this understanding of perfectionism, a better balance between the necessity for development and experiencing the natural goodness of virtue may be seen to emerge as this understanding of perfection can be understood to emphasise the fine-tuning of contextually relevant virtue, rather than the futile striving to emulate an unattainable, unrealistic ideal natural goodness.

Such a response to the metaethical problem avoids all the issues that occurred for the previously suggested strategy of habituating multiple strong attitudes to completely mitigate motivation interference. The acknowledgement that perfectionist development requires a limited form of development sensitive to contextual needs allows the individual to hold virtue attitudes at varying strengths and accessibilities which facilitates their appropriate interaction and the effective operation of practical reasoning. There is no worry that this understanding of virtue cannot be instantiated because it commits to a limited account sensitive to the psychological reality of the individual's capacity for virtue and provides a realistic developmental requirement for the individual. Instead of denying the

natural facts of existence, it has recognised and incorporated them into its understanding of natural goodness.

Therefore, by formulating virtue as sufficiently strong contextually relevant attitudes that can be interfered with by physical disgust, and then adopting a limited, developmental account of virtue, Attitude Virtue can provide a coherent, psychologically realistic account of virtue. This appears to provide an adequate resolution to the metaethical problem, but before we can conclude that it does so, we must address concerns that this leads to problems similar to those present when character trait-based virtue theories accept a limited developmental account of virtue.

4.3 Attitude Virtue's Response to the Residual Problems of Value and Definition

Previous discussion in Chapter 6 Section 3.3.3 identified that, when character trait-based virtue theories attempted to accept this resolution strategy to the metaethical problem — accepting a limited developmental account of virtue naturalistically justified by the virtue of perfectionism — they ran into value, definition, and circularity problems. These arguments will now be briefly recapped.

It was identified that in accepting a limited account of virtue, character trait-based Naturalistic Virtue Theories must commit to a contextually determined account of virtue. However, in defining virtuous character traits through context the virtues themselves become meaningless as they depend on context to define their content. In defining virtue contextually, the value of the virtue also becomes contingent on context, so it is no longer clear why virtues are independently valuable.

Finally, because virtue defines natural goodness, a contextual understanding of virtue entails that natural goodness is also contextually defined, so it is similarly meaningless, but it also leads to a circular justification for natural goodness as natural goodness is defined through physical disgust inhibited virtues and virtue is defined as admirable character traits limited by disgust that produce natural flourishing. Within this, there is no way of independently justifying that value of natural goodness beyond this self-justification, which does not provide a compelling reason for its value.

Because Attitude Virtue has adopted a similar resolution strategy to character trait-based theories — adopting a limited developmental account of virtue justified by the virtue of perfectionism — it is reasonable to consider whether similar problems arise. However, Attitude Virtue can avoid these problems by recognising that the individual's expression of virtue through contextually determined attitudes limited by physical disgust can be understood to be a psychologically realistic, partial instantiation of a universally understood virtue[10]. This idea was demonstrated in Section 4.1 of the previous chapter through Webber's discussion of courage in which he identified there exists multiple different contextually determined definitions of courage, but they can all be united by a universal understanding that pulls in its general features. This model can now be extended by recognising physical disgust motivation interference as a further factor that informs the psychologically realistic instantiation of universally understood virtue.

This avoids the definition problem, as the individual's psychologically realistic instantiation of virtue through sufficiently strong[11] contextually relevant attitudes limited by physical disgust define the conditions for virtue in that specific context, but a coherent definition of virtue is maintained by the universal understanding of virtue it is understood to instantiate. An individual's contextual expression of virtue can therefore be identified as a virtue through the identification of features of their action that express features of a specific virtue. For example, lying to a patient can be understood as kindness as it demonstrates a consideration for the patient, not wanting to cause them any additional pain.

The value of the virtues can be maintained by recognising that the individual's sufficiently strong, contextually relevant attitude limited by physical disgust expresses an element of a universally understood and independently valued virtue, and the independent value of the virtue is maintained through the recognition that these universally understood virtues best fulfil the role McMullin attributes them as existential problem solvers that facilitate balance.

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[10] The following argument takes the same form to the one presented during the discussion of how Attitude Virtue can provide a consistent contextually limited account during the discussion of the plurality of ways in which it is possible to lead a naturally good life in Chapter 7 Section 4.1, however, it is worth restating here for clarity in response to the issue, and for the identification of any unique considerations that arise when it is used in response to the problem of motivation interference.

[11] Here, 'sufficiently strong' is describing the necessary strength relative to context, not necessarily an intensely habituated, firmly held attitude.

Despite only displaying some features of any given universal virtue, the individual's psychologically realistic instantiation of virtue is itself valuable as it is an expression of the overall (valuable) virtue, and it is an expression of the features of that virtue necessary to solve their contextually specific existential problems, so it facilitates their living well naturally in their specific context.

Finally, the circularity of natural goodness is avoided as the individual's instantiation of virtue through sufficiently strong contextually appropriate attitudes limited by physical disgust can be understood as a *sufficient approximation* of natural goodness. The sufficiency conditions were established and justified by the virtue of perfectionism — which determined that limited virtue with an appropriately constrained development drive instantiates the psychologically realistic expression of natural goodness — and it does not establish that the individual is fully virtuous, so it does not establish that the individual has achieved perfect natural goodness. Therefore, the independent definition of Natural Goodness established by McMullin as a balanced response to the shifting demands of the different normative domains of existence (2019: 4) can be maintained. The circularity is also broken as the natural value of the virtues is established in their capacity to solve independently understood existential problems. From this, contextual virtue can also be understood to express contextual natural goodness as it facilitates the resolution of context specific existential problems, and balances the contextually specific demands of each normative domain.

Through its recognition that sufficiently strong contextually determined attitudes limited by physical disgust instantiate universally understood virtue, Attitude Virtue can therefore be seen to present a psychologically realistic account of virtue that avoids the value, definition, and circularity problems that occur in a limited character trait-based account of virtue. It can therefore be concluded that this presents a coherent account of virtue and natural goodness, which means Attitude Virtue successfully resolves the problem of motivation interference. Before concluding, the following section will examine why Attitude Virtue can effectively resolve the problems that arise from accepting a limited account of virtue, but character trait-based virtue cannot.

4.4 The Difference Between Attitude Virtue and Character Trait-Based Virtue

The difference between Attitude virtue and character trait-based virtue that determines their capacity to effectively resolve the problems that arise from accepting a limited account of virtue lies in the way they structure virtue. To recap, character trait-based theories hold that an expression of admirable character traits directly instantiates virtue, whereas Attitude Virtue holds that virtuous attitudes instantiate partial representations of universally understood virtue.

Discussion of the problem of motivation interference has identified that Naturalistic Virtue Theories need to present a psychologically realistic account of virtue to maintain a coherent account of natural goodness. Whilst at the same time, they need to maintain a 'complete' understanding of virtue to maintain the consistent value and definition of virtue and natural goodness.

Within Attitude Virtue, this is accomplished through the recognition that sufficiently strong, contextually determined attitudes limited by physical disgust instantiate universally understood virtue. Here, a psychologically realistic account of virtue is maintained by its instantiation through attitudes limited by natural facts, whilst consistent value and definition is maintained through the recognition that these attitudes instantiate universally understood 'complete' virtues.

However, because character trait-based theories directly define virtues as admirable character traits, and natural goodness is defined in terms of virtue, admirable character traits directly define natural goodness. Therefore, for them to accommodate the psychological reality of the individual's capacity for virtuous character traits, they must directly change the definition of virtue and natural goodness and commit it to a limited account that cannot maintain the consistent value and definition of virtue. Therefore, by directly defining natural goodness through character traits, such theories can either maintain a theoretically consistent concept of perfect virtue but a psychologically unrealistic account of virtue, or they can present a psychologically realistic account of virtue that leads to theoretically flawed accounts of virtue and natural goodness.

Understood using Webber's resolution metaphor presented in Section 4.1 of the previous chapter, Naturalistic Virtue Theories can be seen to require the accommodation of both the low-resolution 'general' perspective of virtue to maintain coherence in the concept of

virtue, and the high resolution 'detailed' understanding of virtue to establish the psychological reality of virtue. Through a recognition that appropriately strong contextually relevant attitudes that can be limited by physical disgust can instantiate universally understood virtues, Attitude Virtue is able to do this as these attitudes are the 'high resolution' representations of universally understood 'low resolution' virtues. However, by directly defining natural goodness as admirable character traits, character trait-based formulations of virtue can only conceptualise virtue at a single 'resolution' thereby inducing either problems of psychological realism or problems with the value and definition of virtue and natural goodness.

Finally, it does not seem likely that character trait-based virtue theories could restructure virtue in a way similar to Attitude Virtue to solve the problem. For example, character trait-based virtue theories may attempt to establish that a limited, psychologically realistic understanding of character traits is taken to be as manifestations of universally understood character traits. This endeavour can be seen to run into two problems from the outset, first, acknowledging that psychologically realistic virtuous character traits could be instantiated in such a way that resembles attitudes would lead to the question of what makes these virtuous character traits and not attitudes. Second, it appears it would require holding two different understandings of character traits to represent the same virtue, which would be confusing and conflicting. So, this remains an enduring issue for character trait-based virtue theories.

5 Conclusion

This chapter set out to explore whether Attitude Virtue adhering to the updated understanding of natural goodness established in the previous chapter was able to resolve the problem of motivation interference posed by disgust.

It began by identifying that the two identified forms of motivation interference — when physical disgust overrides behaviour and when it influences judgements — could be understood to consistently interfere with the individual's reasoning and actions during their expression of virtuous attitudes, so the same practical and metaethical problems can be taken to manifest in the same way as before.

Attitude Virtue's response to the practical problem was then examined, and it was determined that it could resolve the problem by acknowledging motivation interference as a naturally occurring inhibition to virtue and accepting that the individual could be considered 'virtuous enough' provided they commit to developing their virtue.

Attitude Virtue's capacity to establish an appropriate developmental strategy in the fact of physical disgust motivation interference was then considered, and it was identified that it could adopt the same strategy of exposure therapy established previously for character trait-based virtue theories in Chapter 6 Section 3.3.2.2, and using the same considerations to identify appropriate instances of motivation interference to mitigate. However, this section also identified that attitude virtue presented another means of virtue development through the habituation of strong, highly accessible attitudes that were less receptive to motivation interference. When taken together, exposure therapy and attitude habituation were understood to effectively mitigate both instances of motivation interference.

The metaethical aspect of the problem of motivation interference was then considered, and the chapter first examined whether the problem could be solved by reconceptualising virtue as contextually appropriate attitudes that have been sufficiently strengthened so they are not interfered with by disgust, so motivation interference is no longer a problem. However, multiple problems could be identified with this view: it interferes with the necessary relationships between attitudes that facilitate appropriate contextual virtue, it interferes with the effective operation of practical reasoning, it is not certain that such development is psychologically possible, and it is in contradiction with naturalistic principles.

The chapter then determined that Attitude Virtue could maintain the established definition of virtue as sufficiently strong contextually appropriate attitudes, recognise physical disgust motivation interference as an established feature of natural goodness, and judge individuals to be virtuous provided they fulfil the established conditions of virtuous behaviour. It determined that such an approach to the problem entailed Attitude Virtue would be committing to a limited account of virtue which necessitated commitment to a developmental account of virtue, and a naturalistic justification for this limited account could be established through the virtue of perfectionism. Here, the chapter also developed Attitude Virtue's understanding of virtuous perfectionism, identifying that there was no single ideal set of attitude strengths virtuous attitude development should aim for, and

virtuous perfectionism within Attitude Virtue can be understood as a self-critical reflection of their contextually specific developmental needs, and employment of appropriate development in relation to this. It was concluded that this provided a coherent, psychologically realistic, and naturalistically justifiable account of virtue, so it appeared to solve the metaethical problem of motivation interference.

A worry that arose from this conclusion was in committing to a limited account of virtue, problems of valuelessness, meaninglessness, and circularity for virtue and natural goodness would arise for Attitude Virtue in the same way they arose for character trait-based naturalistic theories. The capacity for this to occur was then examined, and it was determined that Attitude Virtue can avoid these problems through its recognition that virtuous attitudes instantiate universally understood virtue as the value and definition of virtue are maintained through the universal understanding of virtue. It was then established that individuals could only approximate natural goodness, which meant natural goodness retained a consistent definition, and avoided circularity because the natural value of the virtues is grounded in their capacity to solve independently understood existential problems.

The chapter concluded by establishing that the problem arose for character trait-based virtue theories because they structure virtue in a way that cannot maintain both understandings of virtue necessary to maintain a coherent account of virtue, but by recognising appropriate attitudes instantiated universally understood virtues, Attitude Virtue can maintain this necessary structure.

Overall, discussion has established that when Attitude Virtue adopts McMullin's updated formulation of Natural goodness, it can resolve both the practical and metaethical problems caused by physical disgust motivation interference. It can therefore be concluded that, on this specific conception of virtue, Naturalistic Virtue is compatible with the psychology of disgust insofar as it can resolve the problems uniquely caused by disgust that have been identified by this thesis.

Conclusion

This thesis aimed to assess the implications an empirical account of disgust can have for Naturalistic Virtue Theories. Chapter One began by establishing a basic account of virtues, understanding them to be excellent character traits that are active, persisting, and reliable, and determined that virtue requires emotional and motivational congruence when performing a virtuous action as this displays character consistency with virtue. It then established that, of Naturalistic, Transcendental, and Consequentialist virtue theory, an incompatible account of the psychology of emotion was most threatening to Naturalistic Virtue Theories because these accounts see virtue as a natural state for humans and therefore depend on the psychological reality of virtue for this to be true. A brief exploration of the normative argument surrounding disgust's relationship with morality then determined that disgust is a necessary component of virtue as it constituted an aesthetic moral reaction to displays of vice.

To examine the relationship between disgust and virtue, Chapters Two and Three establish a comprehensive understanding of the psychology of disgust in the form of the Dual Mechanism Theory. This account was developed from the ground up, beginning by exploring the evolutionary origin of the emotion and from here establishing the function, behaviour, and elicitation mechanism. This built an up-to-date account of the emotion's natural function to best test the claim that virtue is a natural state. These chapters identified disgust exists in two forms: the emotion of social disgust — emerging from the evolutionary need for individuals to enforce social boundaries and maintain group values, it responds to displays of character traits that challenge the individual's meaning structure of good character and is characterised as being responsive to reason, context and intentionality; and the physical disgust reflex — emerging from the evolutionary need to protect the organism from poison and parasite exposure, it responds to perceived signs of poison or parasite threat and once activated it is unresponsive to reason, context and intentionality.

Chapter Four assessed the compatibility between the Dual Mechanism Theory and Naturalistic Virtue Theories and determined that, of the two mechanisms, social disgust is the one to directly engage with sociomoral judgments and is therefore responsible for virtuous disgust reactions. Given its responsivity to reason, context, and intentionality, it was deemed capable of producing appropriately virtuous disgust reactions. However, it was

then identified that when a physical disgust elicitor occurs as the object of evaluation in a moral judgement[1] the physical disgust reflex interferes with appropriately virtuous behaviour, making the individual's judgements and actions harsher and more severe.

The following chapter then elaborated upon how exactly physical disgust affects cognition, and how this affected the individual's capacity for virtue. It determined that virtue interference can manifest either by overriding behaviour or by influencing judgements, and in both instances, physical disgust interferes with appropriately virtuous motivation — interfering with an individual's virtue-appropriate reasoning and action.

This chapter continued to develop further features of motivation interference, determining that physical disgust motivation interference's effect on virtuous behaviour varies depending on the type of virtuous behaviour it interfered with — producing an underreaction when it interferes with positively motivated virtuous behaviours and an overreaction when it interferes with negatively motivated virtuous behaviours — and identifying that the severity of motivation interference depends on the intensity of the physical disgust reaction that occurred towards the object of evaluation. It then presented and reviewed evidence for various factors that affect physical disgust intensity, for example the amount of exposure to the elicitor or the individual's health anxiety, and determined these extend the problem as they demonstrate the level of motivation interference is determined by further morally arbitrary features.

Once a complete picture of physical disgust motivation interference had been established, Chapter Six determined the precise problems it caused for Naturalistic Virtue Theories, determining first that physical disgust's consistent interference with virtue-appropriate reasoning and action causes practical problems as it makes virtue impossible to achieve. This problem was then resolved by Naturalistic Virtue Theories committing to Annas' developmental account of virtue that recognised individuals can be considered 'virtuous enough' provided they possess the drive to aspire.

Physical disgust motivation interference also demonstrated that the Naturalistic Virtue Theoretical conception of virtue as stable and consistent is psychologically unrealistic and

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[1] For example, when jurors had to consider evidence that had a physical disgust elicitor as the object of evaluation and then make a just judgement.

this led to the identification of the metaethical problem as it demonstrated natural goodness — which is defined by virtue — is psychologically unrealistic and virtue cannot define natural goodness in its current form. The possibility of committing to a limited, psychologically realistic, account of virtue to resolve this problem was then considered, and it was identified that whilst it is possible to naturalistically justify a limited account of virtue through the virtue of perfectionism, character trait-based naturalistic virtue theories run into value, definition, and circularity problems with virtue and natural goodness when committing to a limited account. So, the metaethical problem was identified to present an enduring problem for Naturalistic Virtue Theories.

The final two chapters explored whether reconceptualising virtue through attitudes could resolve the problems. Chapter Seven began by presenting a characterisation of the psychology of attitudes, explained what Attitude Virtue looks like (identifying that virtue is instantiated through clusters of attitudes), and identified that Attitude Virtue was compatible with thesis relevant concepts[2]. It then used features of natural behaviour drawn out by the psychology of attitudes to update Foot's account of natural goodness, and introduced Irene McMullin's phenomenological account of natural goodness as a viable alternative that can accommodate these updated features of natural function identified by attitude psychology. It also explained how Attitude virtue can underpin this understanding of natural goodness.

Using this new formulation of virtue and updated understanding of natural goodness, Chapter Eight then examined Attitude Virtue's capacity to resolve the problem of motivation interference. It began by examining Attitude Virtue's response to the practical problem and determined that it can resolve it in the same way as character trait-based theories — committing to a limited developmental account that recognised the individual is 'virtuous enough' provided they possess the drive to aspire. In addressing the metaethical problem, the chapter began by considering whether the habituation of strong disgust-resistant attitude was sufficient to solve the problem, but identified multiple problems with this view. It then determined that Attitude Virtue could resolve the metaethical problem by

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[2] Specifically, it identified similarity between attitudes and meaning structures entail attitudes can be understood to be meaning structures, and that Attitude Virtue was capable of accepting a developmental account of virtue.

accepting the previously established definition of Attitudes as a sufficiently strong contextually appropriate attitudes, naturalistically justifying the presence of motivation interference through McMullin's account, recognising that this entails a commitment to limited virtue, and naturalistically justifying this limited account of virtue using an updated understanding of the virtue of perfectionism.

This Chapter then examined whether in committing to a limited account of virtue, Attitude Virtue would run into the same value, definition, and circularity problems as character trait-based Naturalistic Virtue Theories. It determined that Attitude Virtue can avoid these problems by holding that sufficiently strong contextually appropriate attitudes limited by physical disgust constituted local manifestation of universally understood virtue. Virtue's manifestation through attitudes constitutes the psychologically realistic representation of virtue, whilst the value and definition of virtue is maintained through the universal conception. This also breaks circularity as it provides an independent justification for why the virtues instantiate natural goodness — determining they function as problem solvers for independently understood existential problems.

Chapter Eight concluded by elaborating that the difference between Attitude Virtue and character trait-based theories lies in their structure: by directly defining natural goodness as admirable character traits, character trait-based virtue is unable to accommodate the two understandings of virtue necessary to maintain a coherent theory; but by recognising that attitudes instantiate universally understood virtue, Attitude Virtue is able to accommodate both the psychologically realistic understanding of virtue and the complete understanding of virtue necessary to maintain a coherent theory.

Overall, it can be concluded that Naturalistic Virtue Theories can provide an account of virtue that is compatible with the psychology of disgust as established by the Dual Mechanism Theory provided Naturalistic Virtue Theories commit to the limited, development understanding of virtue based in attitudes that was established in Chapter 8 Section 4.2.

However, it is important to note that this conclusion concerning compatibility between Naturalistic Virtue and the Dual Mechanism Theory of disgust must be limited to recognising compatibility in regard to the points explicitly addressed in this thesis, because discussion in

Chapter 4 Section 2.1 identified the potential problem of contextually developed disgust in which it was determined that contextual development of disgust limited the individual from forming a suite of cross-contextually virtuous social disgust reactions which are necessary for virtue. This therefore presents a further potential point of incompatibility, not discussed in this thesis because it is not an issue unique to disgust, which must necessarily limit this conclusion concerning compatibility.

This potential point of incompatibility presents a fruitful avenue of further investigation not only for the further examination of disgust's compatibility with Naturalistic Virtue Theories, but also for the implication identified in Chapter 4 Section 2.1 that this might indicate a broader situationist problem between virtue and emotion.

Regarding the disgust-specific problem of contextual development, a potential solution already presents itself through the recognition that Attitude Virtue can accommodate the plurality of ways in which an individual can lead naturally good lives. This supports the contextual development of virtue through the recognition that contextually developed virtuous attitudes instantiate universally understood virtues, and this view could be extended to recognise the contextual development of virtue entails the contextual development of emotion. However, further elaboration and exploration of this point would be required to establish the efficacy of this solution, which is inappropriate to engage with here, so this discussion is limited to speculative remarks.

Finally, it is worth noting that Attitude Virtue remains a relatively underdeveloped field and would benefit from further work expanding upon the relationship between attitude and virtue. One potentially fruitful avenue of investigation, identified in Chapter 7 Section 2.2, is to develop an understanding of Attitude Virtue's relationship with emotion, to explore whether Attitude Virtue requires emotional congruence with virtuous behaviour in a similar way to character trait-based theories. This would serve to extend the discussion of Virtue's relationship with disgust, and develop a more comprehensive picture of Attitude Virtue. This research could also be extended to explore the relationship between Attitude Virtue and other internal dispositions, such as reasoning or affective experience, questioning whether they are also necessarily required to *perfectly* align with virtuous action as character trait-based virtue theories require, or whether the reality of the psychological behaviour of attitudes allows for some leeway.

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