PART I

SETTING THE STAGE

1

Introduction

A survey of pollution beliefs from cultures around the world over the span of recorded history reveals a remarkable commonality in the types of phenomena viewed as causing impurity. These tend to include corpses, genital emissions (ordinary and pathological), certain animals and disease. How is this striking commonality in disparate cultures to be explained? Before attempting to answer, let us frame the object of investigation in more familiar terms.

Imagine the following scenario: you are staying in a hotel room and wake up to find your bed infested with swarming insects. Fortunately, the front desk assures you that they are perfectly harmless, and, in any case, you were fully clothed. Under these circumstances, would you:

A. Bathe or shower immediately
B. Promptly check out of the hotel and then find a place to bathe or shower
C. Go back to sleep

If you answered A or B to this question, then the notion of pollution should not seem so strange. This psychological response of "contagion" can be defined as the perceived transfer of a negative essence from a source to a target.[1] As several mundane examples can show, there is nothing

[1] Carol Nemeroff and Paul Rozin pioneered the research on the "contagion" response in the 1990s, as summarized in these more recent summaries: "The Makings of the Magical Mind: The Nature and Function of Sympathetic Magical Thinking," in *Imagining the Impossible: Magical, Scientific and Religious Thinking in Children*, eds. K. S. Rosengren, C. N. Johnson and P. L. Harris (Cambridge: Cambridge University Press, 2000), 1–34; "Sympathetic Magical Thinking: The Contagion and Similarity 'Heuristics,'" in *Heuristics*

particularly mystical about the spread of an invisible essence. We experience *actual* contagion in numerous domains: the handling of a smelly object transfers its odor, interaction with a sick individual leads to infection and so on. It is hardly surprising, therefore, that these everyday experiences shape our expectations when interacting with our environment.

The word "contagion" is meaningfully ambivalent, bearing important implications for human psychology. In its everyday usage, it usually refers to the infectiousness of disease. In modern psychological research, however, contagion (also known as "contamination") refers to the "interpretation or response to situations in which *physical contamination* may have occurred."[2] For example, psychological contagion refers to the fact that many people feel a need to wash their hands after touching an animal carcass. As you may have noticed, this definition is illicit: the term is reused in its definition. Though violating a cardinal rule of dictionaries, this definition captures a fascinating aspect of psychological contagion: one's internal response seems to be perfectly attuned to external reality. Contagion seems to emerge at the point where the boundary between mind and world all but dissolves.[3] This startling phenomenon has not eluded evolutionary psychologists. For example, one group of researchers has commented on how disgust "amounts to an implicit germ theory."[4] How did this vital tendency to avoid sources of pathogens emerge in us? Is our aversion to pollution based on Darwinian self-protective instincts? And if so, how were the triggers determined?

This book is dedicated to solving the puzzle of contagion. Its point of departure is the Hebrew Bible, but the scope of the question pertains to all

and Biases: The Psychology of Intuitive Judgment, eds. T. Gilovich, D. W. Griffin and D. Kahneman (Cambridge: Cambridge University Press, 2002), 201–216. This response is often termed "contamination appraisals" in current research.

[2] Paul Rozin and April E. Fallon, "A Perspective on Disgust," *Psychological Review* 94.1 (1987): 29 (emphasis added).

[3] This subtle point was articulated by Gregory Bateson as follows: "In the natural history of the living human being, ontology and epistemology cannot be separated. His (commonly unconscious) beliefs about what sort of world it is will determine how he sees it and acts within it, and his ways of perceiving and acting will determine his beliefs about its nature. The living man is thus bound within a net of epistemological and ontological premises which – regardless of ultimate truth or falsity – become partially self-validating for him" (*Steps to an Ecology of Mind* [Chicago: University of Chicago Press, 1972], 314).

[4] Megan Oaten, Richard J. Stevenson and Trevor I. Case, "Disgust as a Disease Avoidance Mechanism: A Review and Model," *Psychological Bulletin* 135 (2009): 303–332 (313); see also Paul Rozin, Jonathan Haidt and Clark R. McCauley, "Disgust," in *Handbook of Emotions*, eds. M. Lewis, J. M. Haviland-Jones and L. F. Barrett, 3rd ed. (New York: Guilford Press, 2008), 757–776.

humans and all times. The rest of this chapter is dedicated to introducing the key theoretical principles which guide my approach. The next section will situate the current study in relation to previous trends in the investigation of pollution. The discussion will present a central theme of this book, the relation between language and experience, examining how each of these dimensions needs to be confronted in dealing with biblical pollution. As an initial illustration, these principles are applied to understanding semantics of purity in the ancient Near East. The final sections survey the bodies of evidence that will serve as the basis for this study and set forth its broader aims as a synthesis of sciences and humanities. The chapter closes with an appendix which offers a more detailed overview of the key insights of embodied cognition as they are applied in this book.

POINT OF DEPARTURE

Whenever the topic of purity is mentioned in academic discourse in general, and in relation to ancient Israel in particular, discussion turns quickly to anthropologist Mary Douglas' groundbreaking study *Purity and Danger*, published in 1966. As a theoretical work that maintains a pervasive influence in multiple disciplines over fifty years after its publication, it was clearly a rare scholarly achievement.

From the outset, a rather surprising point needs to be stated plainly. The *Purity and Danger* that pops into scholars' minds when the word "purity" is mentioned is usually based on a few selected passages from the book. Douglas' literary executor and intellectual biographer Richard Fardon makes the following revealing observations:

> Being so well known, I had thought that *Purity and Danger* would yield to succinct summary; but rereading it several times, two decades after I last read it cover to cover, I realized how selective my memory of it had become. This would not be worth mentioning, except that other accounts of how to read *Purity and Danger* (including some by Mary Douglas herself) also dwell upon elements of the book's argument to the detriment of the book as a whole.[5]

Remarkably, the modern reception of *Purity and Danger* has tended to focus on a few key passages, while ignoring the complexity, equivocation and problematic aspects of the book as a whole.[6] Furthermore, as far as

[5] *Mary Douglas: An Intellectual Biography* (London/New York, NY: Routledge, 2001), 79.
[6] In Fardon's sympathetic sequential reading of the text, the critical issue of the book is not the topic of impurity but rather a reflection on the role of anthropological discourse in framing "the question of the differences between 'them' (primitives) and 'us' (moderns)"

the Hebrew Bible is concerned, Douglas abandoned many of her own lines of interpretation in her later books.[7]

One of the most enduring contributions of *Purity and Danger* is the possibility that the grimy details of impurity rules can be sublimated to an abstract symbolic discourse on order and disorder. Indeed, a provocative offshoot of this general approach is the view that death, bodily emissions and impure animals have significance beyond bare materialistic concerns, serving as means to represent and maintain social and intellectual boundaries. Yet, it should be recognized that Douglas never even attempts to explain how this symbolic discourse unconsciously emerges. In her efforts to see beyond the nitty-gritty details of purity practices, Douglas never fully accounted for the fact that they remain seated in the body, specifically those less pleasant aspects of it, and that it is precisely in these details that one finds a startling degree of commonality between disparate cultures.

In recent decades, evolutionary psychologists have addressed this lacuna with their etiology of bodily disgust. According to these accounts, disgust serves an adaptive function in protecting individuals against pathogen threats.[8] This evolutionary explanation offers a plausible account for the universality of disgust elicitors, such as disease, vermin, corpses and the like.[9] In recent years, Thomas Kazen is to be credited for applying these insights to pollution in the Hebrew Bible and ancient Judaism, arguing compellingly that naturalistic (evolutionary) and cultural modes of explanation need not be viewed as contradictory.[10]

(ibid., 83). The key point here is that *Purity and Danger* was not necessarily intended to be a systematic treatise on purity as much as a commentary on anthropological method.

[7] As Fardon incisively points out, "Scholars who continue to refer to the thirty-year-old analysis of *Purity and Danger* as if it were Douglas's last word on the subject should at least recognize that the famous 'abominations' of Leviticus are, in Douglas's later view, not abominations at all, and that the 'message' of the editors of Leviticus is not one of ethnic exclusivity" (ibid., 204).

[8] Steven Neuberg, Douglas T. Kenrick and Mark Schaller, "Human Threat Management Systems: Self-Protection and Disease Avoidance," *Neuroscience and Biobehavioral Reviews* 35.4 (2011): 1042–1051; Mark Schaller and Justin H. Park, "The Behavioral Immune System (and Why It Matters)," *Current Directions in Psychological Science* 20.2 (2011): 99–103.

[9] Rozin, Haidt and McCauley, "Disgust"; Daniel Kelly, *Yuck! The Nature and Moral Significance of Disgust* (Cambridge, MA: MIT Press, 2011); Oaten, Stevenson and Case, "Disgust as a Disease Avoidance Mechanism"; Valerie Curtis, Míchéal de Barra and Robert Aunger, "Disgust as an Adaptive System for Disease Avoidance Behavior," *Philosophical Transactions of the Royal Society B: Biological Sciences* 366 (2011): 389–401; Valerie Curtis, *Don't Look, Don't Touch, Don't Eat: The Science Behind Repulsion* (Oxford: Oxford University Press, 2013).

[10] Thomas Kazen, "Impurity, Ritual, and Emotion: A Psycho-Biological Approach," in *Issues of Impurity in Early Judaism* (Winona Lake, IN: Eisenbrauns, 2010), 13–40; Eve

Yet, questions remain. Is it really disgust that can account for all of the types of defilement? How does disgust develop into fully articulated notions of pollution? As will be seen, an attempt to address these broad theoretical questions can lead to striking new understandings of the ancient textual sources. To refine the discussion further, it is necessary to address the relation between language and experience. First, however, it is necessary to examine more closely each side of the equation: the language of pollution and the phenomenon of contagion.

LINGUISTIC PITFALLS OF PURITY

In studying the phenomena of purity and pollution, the potential for terminological confusion is twofold. First of all, it is necessary to recognize that our (etic) analytic vocabulary is fluid and often lacks any criteria delineating what distinguishes purportedly scientific anthropological concepts from the semantics of the relevant terms in our everyday language. Just as products boasting of their "purity" beckon to us from every shelf of the supermarket, on the packages of anything from toilet cleaners to spearmint chewing gum, so too the language of pollution is found in a wide array of domains (most obviously the environmental) which have little bearing on the question at hand. This fluidity would not pose a problem if it were not for the fact that academic conferences and volumes on purity and pollution are often structured by these vernacular usages.

The obvious remedy is to pay attention to the correspondence between our analytic terminology and the emic terms of the culture being studied, but here a second, subtler, source of confusion awaits. The frustrating fact is that even the "native" terminologies are imprecise, serving as generic terms for a heterogeneous group of phenomena. For example, the Biblical Hebrew term for pollution *ṭum'ah* is relatively rare (36 x in the Hebrew Bible) and constitutes a reification of the much more common adjective *ṭam'e* (87 x). In other words, the noun is derivative from the adjective, just as the English "im/purity" and German "un/reinheit" are derivative of their respective adjectives ("im/pure"; "un/rein").[11] This lexicographical observation has important semantic implications, since *ṭum'ah* can have different usages, referring to the source of pollution as well as the state

Levavi Feinstein, *Sexual Pollution in the Hebrew Bible* (Oxford: Oxford University Press, 2014), 11–41.

[11] The priority of the adjectival form is evident from the nominalizing suffixes -ity in English and *-heit* in German.

transferred to the recipient of pollution. Moreover, even when referring to the causes of pollution, this term serves as a generic umbrella category for a heterogeneous array of sources, including disease, impure animals and corpses, each of which operates according to very different rules.[12]

Here we might keep in mind Ludwig Wittgenstein's famous discussion of "games":

> Consider, for example, the activities we call "games." I mean board-games, card-games, ball-games, athletic games, and so on. What is common to them all? – Don't say: "They *must* have something in common, or they would not be called 'games'" – but *look and see* whether there is anything common to all.[13]

Similarly, we cannot take terms like "purity" and "pollution" as being self-understood. Even Mary Douglas herself, reflecting on *Purity and Danger* thirty-eight years later, came to realize the danger of the word "purity":

> "Purity" is one of those traps for the scholarly that Wittgenstein warned us about, a typical philosophical problem about words. Sometimes the screen of my PC goes blank and a little box appears with the message: "You have done an illegal action," then appears an error number and a penalty. It is often like this when we use the word "purity": we get into trouble when we seem to assign it some specific existence.[14]

When seeking to reconstruct native conceptions based on texts, it is necessary to ask whether they are systematic or even coherent. The situation becomes even more complicated when one seeks to address additional crucial variables, such as multiplicity of viewpoints within a culture and changing attitudes over time. These problems bear also on the distinction between literal and rhetorical usages: is it possible to distinguish "real" impurity from "metaphorical" impurity? In order to answer questions such as this, it is necessary to clarify what in the world of experience was referred to by terms like *ṭum'ah*.

CONTAGION AND EXPERIENCE

As pointed out above, disgust research has made a significant contribution to the study of pollution. One aspect of disgust that is highly relevant is its "domain-specificity," referring to the fact that participants in these studies

[12] See next chapter for further discussion of these points.
[13] Ludwig Wittgenstein, *Philosophical Investigations*, trans. G. E. M. Anscombe, P. M. S. Hacker and J. Schulte (Chichester: Wiley-Blackwell, 2009), 36e (§66).
[14] *Jacob's Tears: The Priestly Work of Reconciliation* (Oxford: Oxford University Press, 2006), 159.

respond differently to different types of contamination, be it excrement, tuberculosis or bedbugs.[15] In particular, these various contaminants are treated differently in their modes of transmission, their perceived ramifications and the means for their cleansing.[16] Where do these intuitions come from? Are we born with this capability to identify different types of threat and respond accordingly? To claim that "disgust" can explain this sophisticated capability is little more than hand-waving.

Accordingly, one may ask whether "disgust" is the best term to describe the contagion response. One way to solve this problem is to define "disgust" broadly, as does Valerie Curtis, who identifies it with "the system in brains that drives parasite-avoidance behavior."[17] Still, expanding the scope of "disgust" does not amount to an explanation. A more accurate point of departure is to admit that contagion relates to avoidance emotions more generally, including disgust and fear. To appreciate this last point, it is worth pointing out that the analytic term "disgust" and its designation as a basic emotion entails imposing a somewhat arbitrary boundary onto the emotional landscape.[18] Can either label – "disgust" or "fear" – by itself do justice to the feeling of waking up in an insect-infested bed?

In psychological research, avoidance emotions – and disgust in particular – serve to curb the individual's appetite in the domains of eating and sexuality. It is the possibilities of close contact and oral ingestion of an unwanted entity that elicit vigilant expressions of these emotions. Here it is necessary to stress the primal character of these avoidance emotions, which is most evident in the central role of the olfactory system of the brain, responsible for smell.[19] Theoretical neuroscientist Walter J. Freeman III writes: "The nose was and is the final arbiter of what we

[15] E.g., Bunmi O. Olatunji, Craig Ebesutani, Jonathan Haidt and Chad N. Sawchuk, "Specificity of Disgust Domains in the Prediction of Contamination Anxiety and Avoidance: A Multimodal Examination," *Behavior Therapy* 45.4 (2014): 469–481.

[16] For more detailed discussion, see Yitzhaq Feder, "Contamination Appraisals, Pollution Beliefs and the Role of Cultural Inheritance in Shaping Disease Avoidance Behavior," *Cognitive Science* 40.6 (2016): 1561–1585.

[17] Curtis, *Don't Look*, 34.

[18] James A. Russell, "Core Affect and the Psychological Construction of Emotion," *Psychological Review* 110.1 (2003): 145–172; See Lisa Feldman Barrett, "Are Emotions Natural Kinds?" *Perspectives on Psychological Science* 1.1 (2006): 28–58; Giovanna Colombetti, *The Feeling Body: Affective Science Meets the Enactive Mind* (Cambridge, MA: MIT Press, 2014), 25–82.

[19] Kai Qin Chan et al., "Disgust and Fear Lower Olfactory Threshold," *Emotion* 16.5 (2016): 740–749; Martin Kavaliers, Klaus-Peter Ossenkopp and Elena Choleris, "Social Neuroscience of Disgust," *Genes, Brain and Behavior* 18.1 (2019): e12508.

ingest and of what we are afraid."[20] These observations can go a long way toward explaining the relationship between foul odors and pollution in the Hebrew Bible and elsewhere.[21] As will be seen in the chapters that follow, smell seems to play a key role in detecting sources of impurity in relation to foods, corpses and sex. Still, one cannot dismiss the role of other sensory modalities through which disgust and fear can be elicited.

Even recognizing the importance of these affective mechanisms, they can only go so far in explaining how humans respond to different sources of contamination. As this book will argue, any plausible explanation must acknowledge three partners which together produce this capacity: innate predispositions, experience (learning) and culture. Of these three inputs, the role of experience is the most difficult to isolate in experimental situations, and for this reason has been left out of scholarly discussion, but its contribution is no less significant.

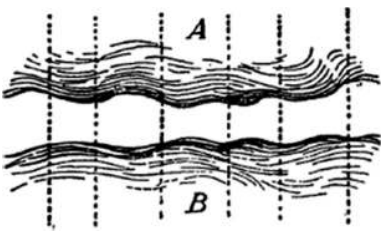
EMBODIMENT AND LANGUAGE

A basic premise of this study is that embodied experience provides the foundation for cultural discourse. In the natural world, the emergence of verbal language among humans is an anomaly that is responsible, more than any other capacity, for their cognitive and technological superiority over other animals. Surprisingly enough, the basis for this system of seemingly unlimited potential is the arbitrary coupling of acoustic signs with ideas, conventional to every language.[22]

This valid insight served as the foundation of Ferdinand de Saussure's *Course on General Linguistics*, but in a distorted form that would have catastrophic ramifications for the humanities:

> The linguistic fact can therefore be pictured in its totality – i.e. language – as a series of contiguous subdivisions marked off on both the indefinite plane of jumbled ideas (A) and the equally vague plane of sounds (B). The following diagram gives a rough idea of it:

[20] *How Brains Make Up Their Minds* (New York: Columbia University Press, 2000), 20.
[21] Following Darwin and building on etymology, most disgust research has focused on taste (e.g., Rozin, Clark and McCauley, "Disgust," 637). For an account that emphasizes smell, see Aurel Kolnai, *On Disgust* (Chicago and La Salle, IL: Open Court, 2004 [1929]). See also Kazen, "Dirt and Disgust," 52–53; Curtis, *Don't Look*, 11–17.
[22] Eva Jablonka and Marion J. Lamb, *Evolution in Four Dimensions* (Cambridge, MA: MIT Press, 2005), 193–204.



The characteristic role of language with respect to thought is not to create a material phonic means for expressing ideas but to serve as a link between thought and sound, under conditions that of necessity bring about the reciprocal delimitations of units. Thought, chaotic by nature, has to become ordered in the process of its decomposition.[23]

This scheme provided the foundations for the notion of linguistic relativity, as articulated by Benjamin Whorf: "We dissect nature along lines laid down by our native languages. The categories and types that we isolate from the world of phenomena we do not find there because they stare every observer in the face; on the contrary, the world is presented in a kaleidoscopic flux of impressions which has to be organized by our minds – and this means largely by the linguistic systems in our minds."[24] In other words, thought is dependent on arbitrary distinctions imposed by language. This implication is expressed clearly by de Saussure himself: "In the language itself, there are only differences … the language includes neither ideas nor sounds existing prior to the linguistic system, but only conceptual and phonetic differences arising out of that system."[25] This overly simplistic scheme leads to many absurdities, especially when serving as the springboard for structuralist and poststructuralist cultural theories in which language is endowed with an unbounded power to construct social phenomena.[26]

Rather than viewing the linguistic system as autonomous, the alternative approach is to view language as inextricably connected with extralinguistic experience. One of the major contributions of cognitive linguistics has been to illuminate the relationship between human experience and semantic structure. This connection is commonly formulated in the

[23] *Course in General Linguistics*, trans. W. Baskin (London: Peter Owen, 1959), 112.
[24] Benjamin Lee Whorf, *Language, Thought and Reality*, ed. J. B. Carroll (Cambridge, MA: MIT Press, 1956), 213.
[25] Saussure, *Course*, 120.
[26] See Edward Slingerland, *What Science Offers the Humanities* (Cambridge University Press, Cambridge, 2008), 74–147.