

Introduction | Understanding Expertise

We might think of our family doctor as expert, our lawyer as expert, and our plumber as expert. Each of these people we might work with we hope are, indeed, expert. More distantly, scientists and expert political commentators on the nightly news pour into our lives with expert advice or insights. With so many experts one might wonder which expert advice to follow and which experts to trust. In fact, expertise is a topic of great concern, with Tom Nichols proclaiming its demise in his *Death of Expertise*. Nichols (2017, 28) argues that the death of expertise is “like a national bout of ill temper, a childish rejection of authority in all its forms coupled to an insistence that strongly held opinions are indistinguishable from facts.” Even in this line of reasoning, as Nichols himself notes, it is not only the public that is culpable for expertise’s demise, citing issues in numerous professions. Consider how soon after the United States had elected its forty-fifth president, and soon after his inauguration, scientists were, quite unbelievably, *protesting* in the streets with signs, coupled with an online movement to challenge the new administration’s seemingly anti-science—anti-*expert*—efforts. Expertise had, it seemed, never been so relevant. Some researchers are perhaps more cautious in their assessment of symptoms suggesting the ill health of expertise. Grundmann (2018, 373) argues that the so-called death of expertise, and the “so-called populist backlash against science and expertise” fueling reports of expertise’s demise, may be “a figment of the imagination, itself in the land of opinion and post-truth.” With the COVID-19 pandemic, expertise has been launched even more significantly into public consciousness and discourse. In either case, it is evident the role of experts and expertise has recently generated much consideration.¹

The concern with the role of experts in modern life, however, is hardly new. Consider Laski’s reflection on *The Limitations of the Expert*. Laski explains that

the very notion of expert knowledge, the requirement to attain and maintain such knowledge, necessarily precludes the expert from guiding public life. “The expert tends,” Laski (1931, 202) argues, “to make his subject the measure of life, instead of making life the measure of his subject.” Laski understands the problem of the expert in public life as one concerned with a kind of practical wisdom, writing that the expert “is an invaluable servant and an impossible master. He can explain the consequences of a proposed policy, indicate its wisdom, measure its danger. He can point out possibilities in a proposed line of action. But it is of the essence of *public wisdom* to take the final initiative out of his hands” (204, emphasis mine).

Widening the idea of experts to be inclusive of “professionals,” Schön’s *The Reflective Practitioner* (1982) charts the postwar ascent of specialists with expertise especially in technical and scientific domains. Indeed, Schön cites the American Academy of the Arts and Sciences journal *Daedalus*, in 1963, which proclaimed, “Everywhere in American life, the professions are triumphant” (Lynn 1963, 649). Such professionals had largely built their persuasive power on a techno-scientific rationality that promised objective, measurable, and progressive outcomes. Throughout the 1970s and into the 1980s, however, a range of failures and disasters catalyzed doubt in professionals. Although this doubt in professionals (and experts) began decades ago, the rise of anti-expert discourse appears to be unabated today.

In addition to critique of experts, overwhelming changes to workforces have generated debate about the role of expertise in the twenty-first century. Lynn’s (1963, 651) introduction to the issue of *Daedalus* on professions came with a relevant warning: “Because there are simply not enough professionals to go around, the practitioner of today is perforce burdened with too much work.” In *The Atlantic*, Jerry Useem (2019) details a trend to view workers as generalists rather than specialists or experts. From the navy’s “hybrid sailors” to online retailer Zappos, where employees are hired into “circles” rather than job titles, expertise seems displaced. Useem characterizes this moment as a transformative one² where conventional understandings of expert knowledge, once assessed in terms of education and experience, are being adapted in favor of some conception of flexibility or adaptability in thinking. In such a reconfiguration, experts as traditionally conceived are displaced from their once favored status in the workplace. Whether such an adaption is promising is not yet clear, and the change in and of itself does not warn of anti-expert sentiments. What this example illustrates is that the status of experts and the very idea of expertise continue to be debated.³

Conversations about experts suggest that important cultural values are being negotiated. And negotiation of these values is accomplished not in the lab but in civic spheres. To understand this moment, we must understand something of the experts' claim to their status. First, an understanding of how experts are conceived is necessary. How expertise is acquired and measured and how publics assess experts and their expertise are also important topics. The rhetorical negotiations surrounding experts and expertise can be illuminated by arguments for and against expert involvement, the boundaries between experts and nonexperts, and matters of trust and values. In these ways, we come to see that expert status is a highly rhetorical activity, at least in the expert-public dynamic. However, the rhetorical activities required to claim expert status in expert communities are perhaps even more significant, if measured by argumentative challenge. In expert-expert negotiations, expert status is indeed accomplished through rhetorical activities.

Although I am arguing that expert status and expertise are both rhetorical in nature, I do not mean to suggest that expertise does not reflect real capacities. We will see that a rhetorical account in fact means that these capacities are quite real and quite critical as a capacity for becoming expert. Expert status, too, is not simply a public relations campaign, although it may be in some cases. Expert status is, rather, often achieved by a complex negotiation with an audience of epistemic claims, a cultivation of skills, and capacities for deliberation and moral judgment, which we understand to be expertise. To this end, the rhetorical conception of expert status and expertise I wish to advance here builds on the work of rhetorical scholars including Danisch (2010), Hartelius (2011), and Majdik and Keith (2011a, 2011b), as well as philosophers examining virtue ethics, and includes concepts of *ethos* (character), *episteme* (knowledge), *techne* (skill or craft), and *phronesis* (practical wisdom). Expertise, further to expert status, is characterized by how such forms of knowledge are invoked in particular situations, comprising intersecting and changing audiences, rhetors, traditions, institutions, objects, and needs, all through forms of practical wisdom.

Understanding experts and expertise asks us to consider what appear to be common characteristics among a variety of knowledgeable people and their various skills. Further, experts and expertise, although most readily identifiable at the level of individual, are concepts that are constituted also by the communities and the spaces where an expert is situated and when expertise takes place. To understand expertise and expert status, a powerful theoretical framework does not require a unifying principle of expertise. Rather, it calls for an approach that

allows for the multiple facets of expertise to be examined with respect to particular situations and the faculty, in a rhetorical sense, or capacity to determine the available means with which to respond appropriately. This book is chiefly concerned with expertise in science, the social sciences, technology, health, and medicine, and explores these fields in academic research primarily, but also industry, public or nonprofit sectors, and, critically, citizen science (the practice of everyday people becoming involved in scientific research). Here, expertise is investigated through the lens of rhetorical studies. Rhetorical studies provide versatile theoretical tools to explore many of the dimensions of expertise and the multidisciplinary literature on expertise. Indeed, rhetorical studies can illuminate the key concepts and definitions while also uncovering who might be deemed an expert when different sets of concepts or definitions are used. Further, rhetorical studies can connect these social aspects of becoming expert to the affinities of the mind that underlie our capacities for becoming and being expert.⁴

With this rhetorical vantage, I examine the cultivation of expert ethos and the training and habituating of the mind through practical wisdom, phronesis, as part of the acquisition of expertise and its ongoing enactment. Further, the concept itself reminds us of the socially situated nature of our ethical commitments. Phronesis is a capacity for moral reasoning constrained by the historical, social, and cultural conditions we inhabit, which is to say the account here is descriptive and not prescriptive, as phronesis itself requires ongoing commitment to new and diverse experience to challenge those common beliefs of our time that are unjust. Such an approach has pragmatic as well as theoretical contributions. For example, it can help us understand why some people do not trust experts, what experts can do about that, and how we can negotiate expertise as central to functioning of our expert-reliant lives.

What or Who Is an Expert?

High status occupational titles may also function metonymically for expertise: doctor, lawyer, scientist, and so on. But a profession or specialization is not synonymous with expertise. I would offer the example of a skillful orator as an expert who can help illustrate why equating specialization and expertise unnecessarily conflates two different conceptions. Consider the mastery of the “ability, in each [particular] case, to see the available means of persuasion” (Aristotle, *Rhet.* 1.2.1355b)⁵ or the “symbolic means of inducing cooperation in beings that by nature

respond to symbols" (Burke 1969, 43) that requires considerable expertise to achieve its most potent effects. Yet rhetoric is not a specialization as we might normally conceive—with a rather more limited or restricted domain of technical knowledge—although a certain technical or theoretical knowledge underlies the field. This is to say, although rhetoricians may be experts in rhetorical craft, they must also become experts⁶ in the domain on which they speak in each situation. Here we find an interesting interplay between specialist and technical knowledge. There is the rhetorical craft, a *techne* and specialist expertise, as well as a generalist expertise of applying this *techne* for a given situation. Thus, already it is evident that expertise operates in two distinct manners. Although expertise and specialization are not synonymous, they are often concomitant. There is some indication that specialized expert skills are tied to certain domains, and that when these skills are applied outside of said domain they no longer appear to have expert qualities (see Gobet 2016, 238). If a domain is closely related to another, experts still perform better than their nonexpert peers or experts from a domain far afield from the specialty of concern. Thus, the reflective practices that allow experts to excel in their profession are situational and domain-specific (Schön 1983, 167).

Another concept we must distinguish from expertise and expert status is authority. When expertise is called on in a democratic sphere, expertise may seem a cognate of authority.⁷ However, expert-to-expert dialectic and deliberation shows a rather different function of expertise. Although expert-to-expert exchanges may still be susceptible to forms of authority, the expert-to-expert deliberation is more immune insofar as the expert's epistemic grounds are nearly equally understood. Miller (2003, 200) explains that Aristotle would not view epistemic negotiations among experts as rhetorical, but rather dialectical, which approximates the kind of rational, *logos*-centric discourse that vernacular accounts of science ascribe to expert intellectual practice. Aristotle, Miller continues, would see such situations as ones where expertise, not ethos, is required: "The intellectual quality needed by the dialectician or the wise person is not *phronesis*, *arete*, or *eunoia*, but *sophia* (wisdom)" (201). Thus, the artistic construction of ethos is unnecessary where there are data, facts, and so on, that might rather be formulated through expert understanding and applied to some problem, the *logos*-centric advocates would have it. Yet, Miller's analysis of risk assessment as a field and broader studies in rhetoric of science have shown that this is a reductive understanding of how epistemic work is conducted. Miller explains that when the important work classical ethos performs to build trust is not accomplished, trust

is lost. In Aristotle's *Rhetoric*, *pistis* provides an important sense of trust, although Garver (2017, 136) reminds us of its rich meaning that can be "rightly translated as proof, argument, reasoning, persuasion, belief, trust, faith, credit, conviction, and confidence." *Pistis* as a state of mind can be achieved through appeals to *ethos*, *pathos*, and *logos* (as good reason). In a related field, philosophy of science, Hardwig (1991) describes the importance of trust among researchers and Whyte and Crease (2010, 412) outline trust in expert and nonexpert interactions, defining trust as "deferring with comfort and confidence to others, about something beyond our knowledge or power, in ways that can potentially hurt us." Trust, the rhetoricians and philosophers have noted, is essential to the very enterprise of science itself, and why violations of trust are taken so seriously, including in retractions, for instance.⁸ Trust is also necessary for more than expert-public / nonexpert deliberation, and Aristotle might caution us this is why ethical arguments—and not, for instance, inflammatory appeals to the emotions—are an important part of rhetorical thinking. Miller's example also clarifies why expert-public deliberation, too, should not conflate expertise with authority. Speaking from a position of authority for experts is a restricted activity, restricted to their own domain of expertise, and engagement with broader public concerns necessarily means said domain of expertise is not inclusive of the full range of issues. Thus, expert advice⁹ is part of deliberative engagement, but so too are the boundaries on expert advice to avoid the encroachment of "techno-scientific rationality" on democratic deliberation.¹⁰

Recentering the concept of *phronesis* in the account of *ethos* provides a critical understanding of how the appeal is more than "mere" persuasion. Rather, *ethos* is partially an ethical comportment toward one's audience and, thus, insufficient when reconfigured through the *logos*-centric appeal to expertise that Miller describes. Further to finding *phronesis* in the *ethotic* appeals, *phronesis* might also be found in those *logos*-based configurations of expertise. Although *sophia* or wisdom may initially seem a desirable intellectual virtue for the expert, ultimately it is its more worldly grounded counterpart, *phronesis*, that haunts the definitions of experts across disciplines. We might locate the "doing of expertise" at the "resolutions of tensions" (as Majdik 2016 argues). When an expert performs to seek such resolution, the expert enacts both individual and collective knowledge. Such enactments are underpinned by configurations of knowledges, inclusive of and, perhaps more provocatively, afforded by *phronesis*, to resolve our tensions. Moving from the role of *phronesis* in *ethos* to the role of *phronesis* in expertise requires some account of rhetorical theory and virtue ethics, to which we now turn.

What Does Rhetorical Theory Tell Us About Experts and Expertise?

When one imagines an expert, one likely conjures some notion of an individual or their work: the inimitable work of Leonardo da Vinci, concretely; or, abstractly, a medical doctor, nuclear scientist, accountant, classical violinist, or champion chess player. When one studies how someone becomes an expert, numerous theories of how one gains knowledge, skills, or practices can be found across various scholarly fields. In other theories of expertise, the social nature of the individual expert is examined, asking how attribution of status helps construct the expert. Normally these experts are situated within disciplines, specialties, or professions where their knowledge or skills strikingly surpass the skills of others working in their area. Recognition of this individual's extraordinariness by their peers or publics is another factor in how one's status as expert is sanctioned. The nature of experts or expertise has changed over time, but the belief that some people have greater knowledge or skill than others in some areas is well established. For decades researchers have taken this understanding and tried to establish psychological and social rationales for differences in knowledge and skill in expert performance.

A rhetorical account of expertise may appear most obvious in a discussion of the artistic or socially constructed and sanctioned ways that experts attain and maintain their status—a study of their ethos, or credibility and ethical comportment toward one's audience, for instance.¹¹ But it is the capacity for deliberation and judgment that are most crucial to the enterprise of expert knowledge and performance. Deliberation and judgment further complicate the already complex notion of expertise, but rhetorical studies offer a substantial body of thinking on the issue. Moreover, rhetorical studies offer a nimble theoretical framework. Hartelius, in her 2011 work *Rhetoric of Expertise* (164), explains, "Approaching expertise as a rhetorical construct releases us from some of the constraining dichotomies that seem to plague the topic. . . . We can use a rhetorical hermeneutic and begin a productive investigation with the assumption that style *and* 'real' knowledge are not only integral but inseparable." Further, examining both the individual and collective nature of ethos in expertise provides a rich understanding of its dynamic nature. Finally, and crucially, understanding that expertise attends to matters of audience is central to a fuller understanding of expertise.¹² Research in rhetorical studies also offers bridges to other fields studying expertise, including the psychological sciences, and through comparative work helps further explain how we cultivate expert capacities and enact expertise

through expert performance. Contemporary rhetorical studies, following several gossamer threads back to antiquity, further offer a cognitive¹³ account that is impressive in its investigative power. Indeed, as we will see, lessons from antiquity and the medieval period concerning the art of memory can advance rhetorical understanding of the operations that underlie our inventive, recollective, and experiential mind, allowing the cultivation of expertise. Indeed, these accounts of the rhetorical habits of mind advance a pragmatic, situational model of expert performance. Key to these habits is *phronesis*, a concept intricately connected to the idea of rhetoric. When we understand expertise as requiring *phronesis*, we must understand expertise as an ongoing engagement by some individual situated both socially and also by the experiential aspects of their being.

Understanding the role of *phronesis* in conceptions of rhetoric can help elucidate why conceptions of *phronesis* are also illuminating in the discussion of expertise. Self (1979) provides an important argument for how and why *phronesis* is a key concept in articulating Aristotelian conceptions of rhetoric. Explaining that Aristotle's ethical understanding of rhetoric is quite well developed, Self reasons that to understand the ethical nature of his rhetoric, one must look to Aristotle's ethical arguments in both *Rhetoric* and *Nicomachean Ethics*.¹⁴ Here Self (1979, 135) provides a succinct account of this argument, writing, "Rhetoric is an art, *phronesis* an intellectual virtue; both are special 'reasoned capacities' which properly function in the world of probabilities; both are normative processes in that they involve rational principles of choice-making; both have general applicability but always require careful analysis of particulars in determining the best response to each specific situation; both ideally take into account the wholeness of human nature (rhetoric in its three appeals, *phronesis* in its balance of desire and reason); and finally, both have social utility and responsibility in that both treat matters of the public good."

A key capacity here for both the art of rhetoric and the enactment of *phronesis* is the ability to deliberate on a particular situation. Self reminds us of the important connection between conceptions of deliberation in Aristotle's *Rhetoric* and *Nicomachean Ethics* with the use of the term *bouleusis*. *Bouleusis* is used in both texts, describing, in *Rhetoric*, "the process of deliberation," and in *Nicomachean Ethics*, "the faculty of the man of practical wisdom" (Self 1979, 137). *Phronesis*, or prudence,¹⁵ is reformulated for techno-scientific modernity and scientific and technical expertise by Danisch (2010). Prudence, Danisch reminds us, is a concept that has evolved along with cultures and a modern conception of prudence can be located in scientific thinking, which is a "special

case of practical reasoning” (189). Majdik and Keith (2011a, 2011b) also provide a framework wherein a conception of expertise is relational to problems or tensions, rather than individual capacities. Articulating expertise in this way affords what they describe as a “practice-centric view of expertise” (2011b, 276; see also, especially, 279). In this view, enacting expertise is measured by one’s ability to articulate a socially grounded and recognizable rationale for one’s decision-making. Further, Hartelius (2011, 171) discusses the importance of prudence in understanding the relationship between the particular and the universal, and the ability of experts to situate their expert or specialized knowledge in relation to “‘big picture’ significance.” It is notable, here, that such a conception of “traditional expertise” takes on a distinct form, notably “serious,” from what Hartelius (2020) articulates as a “gifting logos” or rhetoric of expertise in the digital commons that is keyed into playfulness, *copia*, continuousness, and the common(s). For the purposes here, the discussion of expertise is chiefly preoccupied with the “serious” conceptions of expertise, but Hartelius’s attention to expertise in the digital commons makes a critical move to emphasize the productive epistemic contribution of expertise as making and as gifting, which goes a long way to think about futures for the “serious” or “traditional” forms of expertise, too.

For Danisch, an understanding of expertise as a kind of prudential thinking, or phronesis, is situated within the “risk society” that Beck (1992)¹⁶ has argued has been constituted by techno-scientific modernity.¹⁷ For the purpose of discussion here, this is an especially helpful formulation. Despite efforts to alleviate uncertainty¹⁸ through science and technology, new forms of the uncertainty arose. For Beck (2009), and for Danisch, the conditions of risk society demand global democratic engagement rather than a retreat into an impossible fantasy of cloistered expert knowledge and the scientific ethos as one concerned only with facts.¹⁹ But the situation is somewhat more complicated than rebuilding the *agora*. Rather, risk has reconfigured the values of a democratic public, adding the value of security to democratic values of equality and freedom (Danisch 2010, 182). Current configurations of expert-public relations frequently attempt to situate experts as being in possession of objective knowledge, but it is this positioning that itself fails, Danisch explains. Indeed, because of the positioning of objective knowledge, it is knowledge that has little application to any problem that requires a solution. Further, the possession of such proclaimed objective knowledge is predicated on an antagonistic relationship with publics. The relationship frames the public, the nonexpert, as less rational or even irrational, a problem only to be solved by the

import of expert knowledge to remedy such unscientific thinking. Antagonistic relationships lack the goodwill toward an audience that would reasonably dispose them to hear an expert's arguments and forecloses conversation between the expert and the audience.²⁰

Refiguring what falls under the domain of rhetoric is predicated on what we understand to be certain or probable knowledge. However, for Danisch, the move we must make is to understand that in a risk society, science and technology produce not certainty but probable knowledge. Thus (pace Aristotle), scientific and technical subjects are firmly in the domain of rhetoric. For Danisch, the rhetorical power of twentieth-century experts is imbued with authority. In the twenty-first century, the rhetorical world of expertise has lost some of its authority (Nichols perhaps would not be surprised by Danisch's claim). Rather, Danisch (2010, 188) argues that the "risk society thesis shows that the conditions of possibility for returning judgment and authority to common citizens are now in place, but this has not happened yet."

Prudence might help us remedy this situation. Prudence, Danisch (2010) notes, is historically contingent and, that being so, one might ask, as he does, "What would a scientific and technical form of prudence look like?" or "How would we train citizens in the cultivation of a scientific prudence?" Beginning to formulate an answer involves a conception of prudence aimed at "understanding the ways in which scientific work is itself deliberative and conditioned by uncertainty and controversy" (188). It is not enough, however, to theoretically understand this proposition, nor for scientists alone to understand. Rather, the public also needs to understand this form of practical wisdom that we ascribe to scientific and technical reasoning (189). Most crucially, such reasoning would illustrate how science and technology advance "moral agendas" and ensure that "prudential citizens would have the capacity to read the morality of techno-scientific rationality" (189). A kind of scientific expertise articulated through the lens of phronesis is an important antidote to the seeming confusion concerning the role of expertise today.²¹

Following Danisch, I am interested in the role of phronesis in scientific and technical reasoning as a special application of phronesis and am principally preoccupied with the expert's capacity and need for such practical wisdom. Rather, because expertise foundationally operates relationally, I am interested in understanding how the capacity and need for phronesis shapes expert thinking and doing. I am also interested in how this concept can call us to evaluate our experience, its limitations, and our commitments to others in an ongoing way. That is,

attention to how phronesis itself is an ongoing process that, in being socially situated, demands recognition of its limitations. For example, cultivating this capacity should attend to where its socially situated sensibility of “the good” might, in fact, replicate, for example, sexism, racism, antisemitism, or ableism. Katz (1992, 1993) notes the always socially defined nature of phronesis itself, as reasoning, and of what is good, as a *telos*²² of phronetic reasoning and action, warning specifically of the dangers a phronesis grounded in an ethic of expediency holds. Scientific prudence is not categorically different from other forms of phronesis in this way. Danisch’s argument for the need of prudential citizens to understand technical and scientific arguments, however, follows in an era where our social expertise is so shaped by these discourses. Katz (1993, 45) illustrates the dangers of modern technical and scientific discourses and reasoning in his “The Ethic of Expediency,” where he explains that phronesis is, like other forms of knowledge, socially situated and created. It is important, then, when considering phronesis as a capacity for deliberation, to note that deliberations occur in the already shaped community and culture. That is, phronesis is socially defined.

Even where we might identify and acknowledge the limits of our ethical deliberation, situations may make the best course of action impossible. At the time of completing this book, we globally face a continued pandemic that has demanded daily ethical decision-making that illustrates further the challenges to each person’s phronetic capacities. Wasserman (2020, para. 4) notes how the ethical conversations about the COVID-19 pandemic, which include alarming crisis-based decision-making such as choosing who should be provided life-extending care where such care is limited, “narrow our ethical imagination.” Ethical decisions made prior to the pandemic have dramatically shaped the outcomes, as is evidenced by, for example, the disproportionate impact of the pandemic on racialized communities, in Indigenous communities, the significant losses of life in long-term care homes, and the economic impacts on women, especially women of color. Katz’s (1992, 1993) caution of the ethic of expediency echoes in these ethical failures where economic and political expedencies drove decision-making for decades or longer. Phronesis, in the face of these social inequalities, can describe the capacity to challenge the ethic of expediency, but must also be guarded against the zero-sum ethical deliberations Wasserman cautions against in the current pandemic and, broadly, how we live together. Indeed, as phronesis is a socially constrained mode of ethical thinking, awareness of current limitations and biases is critical.

Insights from Virtue Ethics

The ancient traditions of virtue ethics can illuminate the “virtue” of *phronesis* and how someone might cultivate the capacity for such a virtue.²³ Virtue ethics today can be situated among three major schools of thought in normative ethics, each of which has numerous subfields and permutations.²⁴ Virtue ethics are concerned with one’s character, how one becomes a more virtuous person, and there are pluralities of virtue ethics in Confucianism, Buddhism, Christianity, Judaism, and other traditions. In the ancient Greek tradition characterized by Aristotle, becoming virtuous was crucial to obtaining *eudaimonia*, a kind of fulfillment or flourishing of a person. Indeed, individuals, in this model, must work to habituate themselves, to become virtuous. While a person may have some natural virtues, these are uncultivated and might lead us to do the wrong thing. The ongoing cultivation of virtue is central because it will allow virtuous individuals to know that they have done the right thing, to not worry that they have misstepped. Thus, the virtuous person might experience *eudaimonia* (i.e., be fulfilled). The ideal here—occasional lapses in judgment are not understood as a condemnation of someone’s character—is that someone will be in harmony with doing good. However, the realized, situational, and changing social world we inhabit likely means there will be some tensions as we work toward this ideal, but perhaps we could say we find some harmony even in those moments where we have made mistakes, allowing us to thus continue habituating ourselves to the good.

The changing conception of the good is one attribute that underscores the rhetorical dimensions of a virtue-based approach. Indeed, Blumenberg (2020, 180), writing on the rise of Academic skepticism and its consequences through to nihilism, argues that an “ethics that takes the self-evidence of the good as its point of departure leaves no room for rhetoric as the theory and practice of influencing behavior on the assumption that we do not have access to self-evidence of the good.” Thus, we might understand such a rhetorical virtue-based approach to require situating all *phronetic* reasoning as part of the reasoning itself, a kind of reflexive *phronesis*. But this moves past where we might begin, with an Aristotelian conception, from which we can traverse virtue-based ethics vis-à-vis Greco-Roman rhetoric, and beyond. The departure point is owing to my own training, work, and limitations, and I do not have the expertise to engage in significant comparative work (see, on the challenges and significance of the undertaking, Sim 2007).

For Aristotle, there are both intellectual and moral virtues. Moral virtues tell us about habits by which we might become virtuous by finding the mean, or the middle ground, among vices of excess and deficiency. It is, however, an intellectual *and* moral virtue—*phronesis*—that is especially important to developing our capacities. *Phronesis* allows us to deliberate on a problem and make the appropriate judgments, including in matters of moral decision-making, in habituating ourselves to become virtuous.²⁵ It is not enough, however, to only live ethically without regard to what is true, the purview of intellectual virtues, and thus the two are interconnected. Already we can identify in this relationship how *phronesis* and its capacities are not distinct from that which we might place in the scientific and technical domain. The importance of this virtue even in these domains is clearly manifest through the importance of rhetorical activities, particularly in this risk society where we ruminate on the seeming death of expertise.

To cultivate virtue is to practice habits, not mere routines, that allow the parameters of a situation—its very existence, even—to be identified, to understand the circumstances within which one might act, and to determine through reflection and deliberation the appropriate action that demonstrates our prudence. We accomplish this rhetorically when prudence moves into the public sphere. Duffy, Gallagher, and Holmes (2018) demonstrate the value of virtue ethics to a rhetorical approach and to our contemporary discourses. They explain that the virtues associated with a person of good character (including virtues of “honesty, accountability, generosity, intellectual courage, justice, and others”) living the good life can offer “an alternative to the toxic discourses of post-truth, alternative facts, and other practices of disinformation” (323). Contrasting with a prescriptive moral framework, Duffy et al. argue that a virtue ethics approach helps us respond appropriately, too, to oppressive situations. They explain that “skepticism, righteous anger, and resistance are also virtues,” which are crucial to responding to oppressive situations (323).²⁶ Further, because a virtue-based morality “is not guided by codes or rules,” the virtuous person “knows which virtues to enact, in which settings, for which reasons” (323). These are ideals of one’s character, ideals we work toward through processes of habituating, and the individual is not required to reflect ideals but to strive toward them. For those familiar with the research on expertise, this should be a familiar refrain. Experts, too, require a process of habituating and are always striving toward expertise rather than being in possession of it *per se*.

Expertise and expert status align with this model because they are rhetorical activities—that is, activities that operate not only within one’s own reflection on

truth or with one's philosophical or scientific or technical development alone. Expertise and, perhaps more overtly, expert status are enactments of technical knowledge within a community that has some stake in the truth claims. Although it may seem that a virtue perspective is preoccupied with the individual, as Bergès (2015, 114) notes, in the Aristotelian tradition and in Platonic conceptions the character of individuals is "regarded as operating within a community. Virtue is seen as that which enables us to perform our function well; hence, a part of flourishing depends on being part of a city." Maimonides, too, notes the foundational essence of virtues as our relation to others, writing of the third kind of perfection a person can achieve—moral perfection—that "all moral principles concern the relation of man to his neighbour; the perfection of man's moral principles is, as it were, given to man for the benefit of mankind" (*Guide of the Perplexed* 3.54).²⁷ Among the virtues, and perhaps mostly directly imported to rhetoric by Aristotle, phronesis as a governing virtue affords an important way into the discussion of experts and the role of virtue. Gage writes of a *rhetorical* conception of phronesis, that it may be understood as "*the ability necessary to make informed judgments about the whole rhetorical situation one is in relative to one's own beliefs and needs and the beliefs and needs of others, and about the selection and disposition of rhetorical means to adequately address the exigencies of those situations*" (2018, 329, emphasis in the original). Underlying the importance of phronesis is always, Gage explains, "the absence of certainty" (329). Absence of certainty is a notable feature of situations where we require expertise and experts. If we understand expertise merely as mastery of some scientific knowledge (episteme) or skills (techne), we remove the sense of the social, real-world application.

Further, before even integrating another form of knowledge, we must see the importance of integrating such theoretical knowledge and also skills, what we might call the *knowing-that* (e.g., the theoretical knowledge, scientific knowledge, or episteme) and *knowing-how* (the skills or techne).²⁸ Skills are composed of a complex arrangement of techne, or craft, along with theoretical knowledge, as Annas (2011) explains. One cannot merely know-how (have a skill) without knowing-that (have some theoretical understanding) and be said to properly have a skill (techne); rather, know-how alone might rather be described as a knack (*empeiria*). This is not to suggest that an anti-intellectual commitment to *know-how* (as "instinctive skill") is a path toward truth (White 1962, 468; see also, especially, 461). Rather, this is to distinguish between modern vernacular conceptions of skills when dismissed relative to "knowledge" as meaning something closer to *empeiria* than techne. To understand a skill as something less-than, such

as in these uses, would be to reduce and distort Aristotle's conception of phronesis as *like* a skill (as *techne*). Further, skills are inclusive of forms of knowledge where we may know more than we can say, following Polanyi's (1966) conception of tacit knowledge, and are also inclusive of kinesthetic modes of knowledge, which offer a provocative way into exploring—reducing or dissolving—subject-object relations (see, for instance, Harper 1992, 133). Knowing-how without knowing-that amounts to an “inarticulate practical knack, an ability to manipulate the world which is not at a sufficiently rational level to be judged epistemically,” as Annas writes (2006, 290). Allowing for a perspective where knowing-how is divorced from knowing-that, we are able to accept that there is “no such thing as practical expertise, only knacks—that there is no significant difference between the inarticulate practitioner and the expert in the field” (290). “This,” Annas argues of a position where knowing-how does not involve in anyway knowing-that, “is ridiculous” (290).

Understanding the relationships of theoretical knowledge and skills in moral knowledge is illuminating in expert knowledge because it helps us chart the similar relationship between knowledge and skills in expertise. Further, this understanding also clarifies why moral aspects of practical knowledge must be considered. When theorizing moral knowledge as or *like* skills, there are certainly features that distinguish such skill from those commonly associated with expert practice. The distinguishing feature is that moral knowledge-as-skill is a global skill in living one's life whereas what we could conventionally think of as expert skills are quite local in their application. However, in cases of both moral and technical knowledge, practical wisdom is a capacity that can help develop a systematic understanding of a subject where there were once “piecemeal” beliefs accounting for the operational framework of understanding. Socrates's method is principled on such an effort to move from piecemeal, belief-based understandings to more systematic understandings. A range of expertises also require this kind of systematic understanding, from building a house to, Annas explains, the understanding of moral forms in the Platonic tradition. Within such a formulation of knowledge, we might see how it cannot be divorced from expertise but also how it does not itself constitute expertise. But this is not, in fact, inconsistent with the model of expertise developed here with respect to moral knowledge, but rather seems to be restricted to models of knowledge as episteme and perhaps some form of practical knowledge with respect to experiences. Further, “skills” in the contemporary sense are not well distinguished from knacks (*empeiria*), but for Aristotle and others in Greek antiquity skills (*techne*) required intellectual

articulation (Annas 2011, 19–20). Moral knowledge may seem different, as Annas (2006, 290) speculates, because “coming to understand a moral Form is harder than the other cases.” Consider, as Annas does, how moral questions are likely to pose more complex challenges than the challenge of, say, learning something about electronics. Critically, however, Annas argues that this discrepancy in difficulty is “in itself is not reason to deny that both are examples of practical knowledge” (290). Ultimately, Annas makes clear that moral knowledge and expert knowledge are forms of practical knowledge. But it is not enough to say this is so and these two forms of practical knowledge are alike in certain ways that provide us some understanding of the other. Such is the case because where we equate experts with expertise, and expertise with skill—inclusive of knowing-that (*episteme*) and knowing-how (*techne*)—we are left with a rhetorically incomplete understanding of experts and expertise. Practical knowledge offered through *phronesis*, combined with practical knowledge as *techne*, provides a vital intersection for understanding about experts and expertise in a rhetorically complete way.

Such a sensibility about moral knowledge as practical knowledge is a recurring theme in developing a rhetorical account of *phronesis* as a moral comportment that experts must acquire. Indeed, the requirements for *phronesis* include technical capacities and, crucially, the ability to deliberate. Aristotle’s account of deliberation as a technical and moral activity in *phronesis* is treated in the next chapter, but here the more pressing matter seems to be a contemporary orientation to understand desire as a foundational motivational force in philosophical studies. Annas (2006, 292) refutes the question of desire in the case of experts: “Experts deliberate about the objects of their presence by pain and frustration until they are fulfilled. . . . Experts deliberate about the objects of their expertise, not about how to fulfill their desires (of course they might do the latter, but not in a way relevant to the exercise of their expertise).” Rather, it is a state of enjoyment of the action that seems relevant, and Annas links experience of performing virtuous actions to Csikszentmihalyi’s flow, a kind of complete immersion in experience and performance (see Csikszentmihalyi 1990, 1996, 1997). Experiencing virtuous action as the virtuous person is likened to this state. What I suggest here, contrary to Annas’s argument, is that experience of good reason for the expert, like the virtuous person’s performance of different virtues, has a similar and possibly overlapping phenomenology.

Diverse ways of knowing provide insight into complex forms of knowledge and expert understanding, including those tacit dimensions affecting the seemingly

effortless performance of experts. A critical concept for understanding tacit dimensions is the idea of *phronesis*, which allows for a complex operation where forms of epistemic knowledge, experience, and skill are enacted through an ethically framed capacity. Those ethical dimensions that emerge in this exchange of expert and audience are enacted through *ethos*, in concert with an audience. In the former understanding, practice begins to provide some insight into how a novice acquires the required knowledge and abilities or skills along their path to being expert. In both accounts, many researchers have noted how knowledge and practice function together to provide experts with models that allow them to more effectively, for instance, “parse” knowledge (Bereiter and Scardamalia 1993, 37) or “chunk” information (Chase and Simon 1973). Being able to parse information allows experts to better assess and respond to some exigence.

Even in those constrained, measurable situations such as those studied through the cognitive approaches of Chase and Simon, such as Elo-rated chess matches, the variables introduced in the complexity of a game, including the opponent, their strategies, and so on, all require experts outperform even some of the strongest competitors. “Winning chess matches (or any kind of game),” as Douglas (2018, 98) writes, “is not going to help us grapple with the kinds of complex problems society faces.” We require, that is, that experts can operate in uncertainty, otherwise the measure of expertise is extremely low. More challenging moments, the moments that push the limits of our knowledge, are better indicators of becoming expert. To operate in those uncertain, challenging moments, we require *phronesis*. Gage (2018, 329) explains that we can characterize *phronesis* as the “will to act (rhetorically) with confidence but without certainty, which entails taking the risk of being ineffective or unbelievable despite one’s best efforts,” and do so within an effort to do good. Expertise, then, is not simply a matter of acquiring some knowledge and practicing some skill, but, crucially, of *applying* knowledge and skill to some problem, some situation, and doing so with good intentions. Even when considering the role of theory, the knowing-that, its application is not only to further knowledge building in singularly disciplinary contexts. Fan (2020, 40) powerfully argues, for example, that “the point of theory in times of crisis is to be found within crises themselves—in action in street protests, hospital wings, and legal institutions around the world.” It seems, then, sensible that we might understand the role of *phronesis* as that intellectual capacity to deliberate. The question of good intentions in doing so, however, requires further consideration.

In its moral constitution, *phronesis* requires that expert performance would be done with good ends, not merely achieving good ends. Such a distinction is

important because it puts the character of the expert at the center of the act. Here we find a seemingly difficult problem, because certainly someone can have highly specialized knowledge or skill, as well as some ability to judge situations, but ultimately serve ends we might, as a society, a public, say are distinctly *not good*. Consider, for instance, a highly proficient doctor who decides those patients who should be mended and those who might, even in the presence of viable treatments, be left to die. In medicine, the built-in ethical norms suggest that physicians acting in this manner would not be expert insofar as they violate the commitments of their oath, failing to understand their social role as designated medical experts. In normal operating situations this may be the case, but the COVID-19 pandemic demonstrates how this question is vastly more complex than one might hope and entails situations and decision-making preceding the pandemic. As hospitals reached capacity in the spring of 2020 and physicians made impossible ethical decisions about whom they would try to save and whom they could not help, the ongoing requirement and limitations of phronesis are painfully demonstrated. Physicians, in their duties, too, would succumb to the disease. Here the situational, moral questions these experts are tasked with making on an ongoing basis is even more starkly illustrated than the already difficult life-and-death decisions physicians sometimes make, and without definitive answers.

In another domain, we might look at software engineers who build new technical products that reproduce racism (see Noble 2018). Their technical ability, either theoretical or practical applications of coding, allow them to act in a seemingly expert manner, but what they produce may, in fact, offer little in the way of what is good. Instead, the supposed expertise, in fact, perpetuates forms of violence and oppression that are inexcusable. Although the tools may seemingly have some functionality that eases the lives of some, it comes at a cost to others. Even in those cases where racism or sexism might be less embedded (it is unlikely to be absent) in the technologies, many fundamentally operate in such a way that convenience is afforded by the cost of privacy—we might say, often, an unwitting exchange for consumers (see Fernback and Papacharissi 2007). But is the highly skilled, well-compensated tech wizard in fact an expert if lacking a socially responsible and responsive comportment? Socially, we might very well say yes; however, Aristotle provides us a good reason to say no. These individuals, rather, have a knack (*empeiria*) that allows them to excel at their occupation, but they do so in part through ignorance (or, in some cases, he might caution, deception). They do not act in service of the community,²⁹ but rather the bottom line. Here

the community makes a social decision of who is expert, whom to trust, and this is certainly debatable. However, the status of expertise, its purported death, and rejections of experts suggest there is, even in these highly technical domains, some sense of a social contract among experts and publics that has failed. That is to say that expert status *is* a social agreement. The social agreement, I wish to add, also means that sexism, racism, and other forms of prejudice have an impact on who is viewed as an expert, and this can vary greatly across contexts, which I discussed at length in earlier versions of this book, but which, indeed, require their own substantial treatment that I could not adequately explore in the provisional account offered here. Expertise, too, is a social agreement insofar as it is not mere technical competency, but a form of knowledge that others require to make informed decisions about their lives, which makes violations of such an understanding dangerous. Expert status and expertise, thus, are subjects to which rhetoricians and professional communicators can contribute important insights. As Walwema (2020, 36) explains, scholars studying rhetoric and professional communication can illuminate the role “expertise can play in fostering the trust that enables the public to make good decisions.” Rhetorically, the deliberative genre (forward-looking) of expert performance, often inexorably linked to the forensic genres (backward-looking) with which expertise is partially constituted, demands of experts phronetic capacities, inclusive of moral deliberation. A rhetorical understanding of expertise is not simply *knowing-that* (episteme) and *knowing-how* (techne) but *knowing-why* (as enacted through phronesis, practical wisdom, and based on its underlying capacities).

Speaking with the Experts

This book uses rhetorical approaches to understand the practice and relational-based theories of expertise in the multidisciplinary literature. In doing so, the central argument of the book is that a rhetorical account of expertise shows that both individualist and relational models of expertise explicate various aspects of the phenomenon of expertise, and that both are illuminating for a comprehensive rhetorical understanding of the concept. Further to this point, a rhetorical approach relying on both individual practice and attributional-relational features is required. Rhetoric is an inventive art, one that shows us how seemingly rote practice and memorization is, in fact, more inventive and, crucially, fundamental to enacting expertise in each situation, along with identifying the recurring

situations and associated expectations for performance. As an inventive art these situations are pregnant with affordances and *kairotic* moments, and constrained by social norms and conventions, expert knowledge and patterns of thinking, and audience expectations; further, they are in each instance, new while invocative of past recurrences.³⁰

Within this framework, the audience is recalled, often absent in accounts of expertise, and so too are what we might call cognitive aspects, including the affective, ethical, social, and their intersections. The continual improvement of expert performance, as documented thoroughly in the psychological sciences, illustrates this case. Consider the high performing athletes of the 1940s and today. Today's athletes far outpace their earlier counterparts due to the evolution of their training as well as the situational features of expert athletic performance with respect to audience. The evolution of experts and expert training reveals audience as competition, audience as judges, audience as consumers of sport, et cetera. Rhetoric offers a complex theoretical framework that allows for contingencies, characters and credibility, socialization and socio-cognitive apprenticing, tensions between stabilization and change, and cognitive wetware in a formulation of expertise. Unfolding some of the complexities that constitute expertise and expert status is one of the chief goals of the present work. Aligned with this objective, the research program that provides expert insight from surveys and interviews³¹ for this book sought to understand how experts evaluate others' expert status in multidisciplinary settings.³²

Multidisciplinary research teams offer an interesting site to explore expertise because they have many kinds of experts involved, and the complexity of assessing expertise is considerable. The rationale behind examining multidisciplinary teams³³ is that participants cannot measure only competencies or proficiencies in a specialized area as a marker of expertise. Consider, for instance, a multidisciplinary academic research team comprising an ecologist, a computational modeler, an anthropologist, and a historian. Each of these researchers have some expertise—in terms of capacities and attributed credibility—in their areas of specialization. Although there may be some overlap in interest or specialization, or even perhaps methods and epistemological commitments, each researcher has a different configuration of expertise within their disciplinary home. Given that each expert will have limited abilities to fully assess the expertise of any other expert based on demonstrations of knowledge and skills within a specialty, the group of experts is likely to develop other measures of expert status and credibility. That is, if it is impossible to assess highly specialized skills required of an expert

in each specialty, it is necessary to otherwise calculate the likelihood of one's colleague's capabilities. Because the rhetorical dimensions of expertise are negotiated and adjudicated by various kinds of professionals, it seemed prudent to sample a variety of these professionals to learn about what they assess. Speaking with professionals about how they understand their own expertise, and how they believe they became experts, provides fascinating insights, too. Surveying and interviewing self-defined experts in multidisciplinary teams provided the basis for this research.³⁴ The research program focuses especially on members of multidisciplinary science, technology, engineering, and mathematics (STEM) teams. My interest in multidisciplinary teams quickly necessitated an expanded range of participants, and my research program might ultimately be said to include members of science, technology, engineering, arts, and mathematics (STEAM) teams and citizen scientists. Not wanting to conflate expertise with professional status, citizen scientists are an important group to include because they are everyday people who participate in scientific research.³⁵

Using a survey,³⁶ participants identifying as professionals and experts³⁷ were asked a range of questions, including about their job title, field of study, degrees, years of postsecondary study, and years of professional experience.³⁸ Participants were also asked about their confidence in assessing experts in their own area and others, words they associate with an expert or someone who has expertise, and how they identify collaborators. Semi-structured interviews³⁹ were also used and participants identifying as professionals and citizen scientists⁴⁰ were asked to tell us how they defined expertise, how they became experts, and how they determined if the individuals they work with in these teams are experts.

Overview of Chapters

Beginning in the first chapter, the tradition of virtue ethics and its implications for a theory of expertise are explored alongside current social theories of expertise. In this chapter, the idea of how expertise both requires moral knowledge and is a continual process of being is advanced. Virtue ethics is essential because it provides not only a model of moral philosophy, but one tied to the development of Aristotle's theory of rhetoric. Further, the tradition helps us trace some of the individual, agent-based aspects of expert capacities that cannot be located only in the activity of "expertising," for example, but in the cultivation and habituation of mental operations. In chapter 2, research in rhetorical studies of science, a

subfield of rhetorical theory, illustrates how expertise is indeed a rhetorical act. Drawing on concepts of ethos, character, as well as practices of expert communities, this chapter situates rhetorical studies in broader studies of expertise and illustrates that rhetorical studies recenters two important aspects of expertise, the audience for expertise and the moral character of the expert. Chapter 3 examines psychological theories of expertise, notably studies of practice and memory in expertise. Rhetorical theory powerfully articulates the capacities that allow one to cultivate what is here referred to as expertise through the study of memory, which aligns with but also complicates contemporary psychological studies. Memory and its relationship to prudence during the medieval period helps illustrate how expertise is more than mere cognitive capacity, but an enactment and comportment of knowledges within an extended ethical framework. An ethical accounting of expertise allows us to examine the notion of someone who attempts to do right and understand the best solution in a situation without preoccupying ourselves with specific, singular instances of ethical concern. We see this in medieval memory through to de Groot's foundational studies on chess masters and contemporary cognitive studies. All of this, too, is grounded not in the kind of positivist, super logical, and rational individual, but in matters of emotion, individual experience, relations to others, et cetera. What that tells us is important, too, for how we think about and communicate with audiences, because the way rhetoric permeates even expert thinking provides a bridge to the nonexpert by way of virtue, goodwill, and good reason—ethos, but ethos as deeply ethical, community based, and relational. Experts, then, are characterized not only by those cognitive capacities, but as situated rhetorical actors.

Throughout the first chapters, experts explain in a series of vignettes how they believe they came to be experts. It is not surprising, given the complexity of the task, that different experts may have different perspectives on how they became expert. Subjective experiences are reported; indeed, they must be subjective when we ask someone to reflect on potentially decades of learning, experience, practice, and argument, as well as material or social barriers, personal challenges, and so on. Because learning is an individual experience, the responses given by participants provide examples to apply the complex theories that underlie the rhetoric, philosophy, sociology, and psychology of expertise. The stories offered by our participants are smart, funny, and help unravel in multiple forms how we cultivate expertise.

In chapters 4 and 5, a thematic analysis brings together a series of lessons offered by participants in their rich and thoughtful responses. In chapter 4,

exploring survey and interview data, the voice of self-identified experts articulates how they conceive of expertise and how they assess other experts. Using data from survey responses as well as excerpts from interviews with self-identified experts, a complex account of expertise emerges. Chapter 5 continues the investigation with insights from citizen scientists. Citizen science normally describes two broad ranges of activities. First, there are those citizens who are enlisted to participate in scientific research as designed and governed by professional scientists. In another model of citizen science, everyday people initiate the research and govern its progress, rather than being directed by scientists. Important in their responses is an expanded understanding of expertise and experts beyond professional confines, extending to those uncredentialed but working within a specialized area. The concluding chapter of the book distills the case for a rhetorical approach to expertise, emphasizing the importance of moral knowledge as *phronesis* in the cultivation of one's character and expert abilities, in relation to one's goodwill toward expert, less expert, and nonexpert audiences. Distinctions between how one's expert status operates, its ethotic qualities, and the conception of expertise remain a preoccupation. Ultimately, the book argues that expertise is the enactment of knowledge and skills, through practical judgment and practical wisdom founded on integrated experience and, critically, through an ethical framework relational to one's audience, and most applicable to the situation or problem one faces.