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Ethics for Climate Change Communicators

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Summary and Keywords

Over the last decade, scholars have devoted significant attention to making climate change communication more effective but less attention to ensuring that it is ethical. This neglect risks blurring the distinction between persuasion and manipulation, generating distrust among audiences, and obscuring the conceptual resources needed to guide communicators.

Three prevailing approaches to moral philosophy can illuminate various ethical considerations involved in communicating climate change. *Consequentialism*, which evaluates actions as morally right or wrong according to their consequences, is the implicit moral framework shared by many social scientists and policymakers interested in climate change. While consequentialism rightly emphasizes the consequences of communication, its exclusive focus on the effectiveness of communication tends to obscure other moral considerations, such as what communicators owe to audiences as a matter of duty or respect. *Deontology* better captures these duties and provides grounds for communicating in ways that respect the rights of citizens to deliberate and decide how to act. But because deontology tends to cast ethics as an abstract set of universalizable principles, it often downplays the virtues of character needed to motivate action and apply principles across a variety of contexts. *Virtue ethics* seeks to overcome the limits of both consequentialism and deontology by focusing on the virtues that individuals and communities need to flourish. While virtue ethics is often criticized for failing to provide a concrete blueprint for action, its conception of moral development and thick vocabulary of virtues and vices offer a robust set of practical and conceptual resources for guiding the actions, attitudes, and relationships that characterize climate change communication. Ultimately, all three approaches highlight moral considerations that should inform the ethics of communicating climate change.

Keywords: ethics, climate change communication, persuasion, framing, consequences, consequentialism, principles, duties, deontology, virtues, virtue ethics, moral philosophy

Introduction

Over the last decade, scholars have devoted significant attention to making climate change communication more effective, offering useful guidance on how to overcome cognitive biases, engage audiences' values and emotions, and make science more accessible to a wide range of audiences.[1] However, much less attention has been devoted to ensuring that climate change communication is ethical.[2] This neglect risks blurring the distinction between persuasion and manipulation, generating distrust among audiences, and obscuring the conceptual resources needed to guide communicators.

Ethics is relevant to climate change communication for at least two reasons (Lamb & Lane, 2016, pp. 240–241). First, global climate change is itself an ethical issue, not simply a scientific or political one (Coady & Corry, 2013; Gardiner, 2006, 2010; Jamieson, 1992, 2014; Lane, 2012, pp. 19–21; Markowitz & Shariff, 2012). This "perfect moral storm" (Gardiner, 2006) involves a number of ethical issues, including considerations of how to rectify historic injustice and ensure justice to future generations, coordinate collective action and address the unequal distribution of economic and ecological harms and benefits, motivate effective action and assign responsibility given the diffusion of environmental causes and effects, and cultivate the virtues needed to guide right action and avoid moral corruption.[3] For these reasons, any communication about climate change involves ethical considerations.

A second, more neglected way in which climate change communication involves ethics is that communication itself can be subject to ethical analysis. Ethical considerations attach not only to *what* climate communicators say but also to *how* they say it. This means that various dimensions of climate change communication—including specific acts of communication, the institutions and relationships in which these acts are situated, and the virtues, norms, and principles that regulate those acts, institutions, and relationships—can be subject to moral evaluation (Lamb & Lane, 2016). These aspects of communication can be morally better or worse depending on how communicators and audiences treat each other.

In this respect, climate change communication is no different from other forms of interpersonal communication, but in other ways, climate change presents particular challenges. The first set of challenges relates to communicating that climate change is an ethical issue worthy of deliberation and action. Analyzing recent research in cognitive psychology, Ezra Markowitz and Azim Shariff (2012, pp. 243–245) identify six empirical reasons why climate change "often fails to activate our moral intuitions." First, climate change is "an abstract, temporally and spatially distant phenomenon consisting of many different, disparate, and seemingly incongruous events" and therefore encourages "cold, cognitively demanding and ultimately relatively less motivating moral reasoning." Second, climate change is not typically perceived as an "intentional moral transgression" by any one person, but as an unintentional side effect of many discrete actions. This

perception makes it more difficult to identify responsible agents, which, in turn, reduces emotional engagement. Third, because climate change is caused by human behavior, climate communication can provoke self-defensive biases that discourage audiences from taking responsibility. According to Markowitz and Shariff, many of those most responsible for climate change's worst effects—and thus most able to mitigate them—"are the people most motivated to deny their complicity and resist change." Fourth, climate change has effects that are largely distant and uncertain, which, studies show, often inhibit motivation or encourage "overconfidence biases" that cause audiences to respond "over-optimistically" to uncertainties and thereby fail to act urgently. Fifth, climate change is a highly politicized and polarizing issue that is frequently framed in terms of harm and fairness—two values that, studies suggest, are generally more important to self-identified liberals than conservatives. As a result, climate communication can often fail to engage the values of those who tend to place more value on communal belonging, respect for authority, and purity and sanctity. Finally, climate change is perceived to have the worst effects on individuals in faraway places or future generations, which makes it harder to identify victims as part of one's in-group. Since the lack of in-group identity lessens the emotional connection to victims, it inhibits the motivation to respond to their plight. These features, Markowitz and Shariff conclude, make it difficult to register climate change as an ethical issue (2012, pp. 244–245; see also Gardiner, 2006; Jamieson, 2014, pp. 61–104, 144–177; Moser, 2010, pp. 33–37; Moser & Dilling, 2007B; Weber & Stern, 2011).

In response to such challenges, scholars across various fields have recommended new ways to "frame" climate change to promote public engagement and motivate action (e.g., CRED, 2009, pp. 6–13; Lakoff, 2010; Moser, 2010, p. 39; Moser & Dilling, 2011, pp. 166–168; Nisbet, 2009; Pickering, 2016). For their part, Markowitz and Shariff identify six "evidence-based strategies" to "more effectively rally moral concern": (1) framing climate change more broadly to appeal to existing moral values and engage diverse communities, (2) focusing on the burdens rather than the benefits to future generations, (3) using "emotional carrots, not sticks" by appealing to more positive emotions such as hope and gratitude rather than anxiety, guilt, and shame, (4) avoiding excessive appeal to "extrinsic motivators"—such as economic incentives—that might crowd out intrinsic motivators, (5) increasing empathy for, and identification with, individuals in future generations or faraway places to expand a sense of group identity, and (6) highlighting "pro-environmental, pro-social injunctive norms" to leverage social approval to encourage behavioral change (2012, pp. 243, 245–246).

These strategies can help to show *why* climate change is an ethical issue, but a second set of ethical challenges relates to *how* these messages are communicated. One difficulty reflects climate change's relation to the future, which not only makes audiences less likely to be motivated by a distant issue (Weber, 2006) but also creates difficulty for those charged with accurately predicting and communicating the nature of the risks. As Dale Jamieson argues, "Climate change poses threats that are probabilistic, multiple, indirect, often invisible, and unbounded in space and time" (2014, p. 61; see also Jamieson, 1992, pp. 144–146). As a result, climate change communicators must acknowledge various

forms of *uncertainty* about possible outcomes while also creating a sense of *urgency* about grave risks that accompany inaction. The combination of uncertainty and urgency presents ethical challenges for communicators who must effectively yet accurately communicate risks to audiences who must judge how best to respond (Keohane, Lane, & Oppenheimer, 2014; Lane, 2014).

This difficulty highlights another. As Jonathan Pickering notes, climate change communication is often expected to play two distinct, and sometimes conflicting, roles: an "analytical role" that seeks to diagnose and communicate the complex nature of the issue and a "motivational role" that seeks to persuade others to act (2016, pp. 259–263).[4] Different moral norms might attach to each role. The communication of information most relevant to analyzing a problem might not motivate audiences to address it, while the communication most effective in motivating an audience may selectively exclude or downplay parts of the analysis (Pickering, 2016, pp. 259–263). That climate communicators are expected to fulfill both roles simultaneously, often without an explicit division of labor, compounds potential challenges.

A third and related set of challenges reflects potential epistemic inequalities between scientific experts, policymakers, and the general public. The highly technical and often inaccessible nature of climate science presents not only *practical* challenges when communicating with lay audiences but also *ethical* challenges depending on how experts and audiences treat those with different levels of expertise (see Anderson, 2011; Coady & Corry, 2013; Lane, 2014). Potential epistemic inequalities can lead to deception and distrust if communicators hide relevant information, act dismissively toward audiences, or parlay their epistemic advantage to advance their own interests—or if audiences perceive experts to lack good intentions or trustworthy character (Lamb & Lane, 2016; Lane, 2014). Climate communicators must thus consider not only *what* they are communicating but *how* they are communicating in order to treat audiences fairly, encourage mutual dialogue, and enable audiences to contribute their expertise and make judgments about how best to respond.

This emphasis on audience judgment and involvement, in turn, entails that audiences also have epistemic and ethical responsibilities to form the proper intellectual and moral virtues, research and assess the relevant information about climate change, deliberate about appropriate responses, and act according to their best judgment. Unfortunately, many of these responsibilities have been neglected in debates about climate change, partly due to the distorting influence of various cognitive biases and social conditions, from imbalanced media coverage to increasing ideological polarization (see Anderson, 2011; Lane, 2014; Langford & Lane, N.D.). Lacking technical expertise about climate science, however, does not absolve citizens from contributing their own forms of local knowledge or expertise, assessing the arguments and information presented by communicators, or making good decisions about how to act. Both communicators and audiences have ethical responsibilities to evaluate scientific evidence and uncertainty, make good judgments,

and work to challenge the cognitive biases and social conditions that inhibit trust, deliberation, and informed judgment (see Anderson, 2011; Douglas, 2009; Forsyth, 2011; Lane, 2014; Langford & Lane, N.D.).[5]

Yet, as climate change communication is currently practiced, most scholars and communicators focus exclusively on *effective* strategies to persuade audiences and neglect the *ethical* implications of when and how such strategies should be used (Lamb & Lane, 2016, pp. 231–232). This may reflect the current state of the field, which has been led by cognitive and social psychologists who focus primarily on empirical research rather than normative analysis. These scholars have helpfully diagnosed various cognitive biases, highlighted the impact of values, emotions, and worldviews, and identified communication techniques that can be used to change environmental behavior. By correcting the transmission model of communication and showing that knowledge alone does not motivate audiences to respond to climate change, these social scientists have recovered a proper emphasis on two-way communication and produced valuable research to increase the effectiveness of climate change communication (see, e.g., Chess & Johnson, 2007; CRED, 2009; Dryzek & Lo, 2015; Dunwoody, 2007; Fiske & Dupree, 2014; Kahan, 2010; Leiserowitz, 2006, 2007; Lorenzoni & Pidgeon, 2006; Malka, Krosnick, & Langer, 2009; Markowitz & Shariff, 2012; Moser, 2007, 2010; Moser & Dilling, 2007A, 2007B, 2007C, 2011; Nisbet, 2009; Pratt & Rabkin, 2007; Regan, 2007; Swim et al., 2009; Weber, 2006; Weber & Stern, 2011). Yet, given the empirical nature of this research, focusing solely on strategic effectiveness without explicit attention to normative concerns downplays the ethics of using this research and risks engendering distrust among audiences (Lamb & Lane, 2016, pp. 231–232). This risk is particularly significant given that public trust in science has decreased substantially among those most sceptical of climate change (Gauchat, 2012; Malka et al., 2009; McCright, 2007). Partly in response to such distrust, psychologists have explicitly warned against abusing appeals to emotion or concealing scientific uncertainties in ways that "may backfire down the road" (CRED, 2009, p. 20; see also Leiserowitz, 2007, pp. 56–57; Moser & Dilling, 2007C, p. 500). While such guidance shows a helpful awareness of the risks involved in deceptive communication, it still casts these warnings in terms of effectiveness and neglects other considerations that may be relevant to ethical communication (see Lamb & Lane, 2016, pp. 231–232). Some acts of communication may be morally wrong even if they have good consequences.

Most philosophers interested in environmental ethics, however, have not yet devoted significant attention to climate communication. When philosophers attend to scientific communication more generally (e.g., Manson & O'Neill, 2007), they tend to focus on *cognitive* aspects of communication and downplay the *affective* dimensions of character, emotion, and trust that psychologists have identified as essential to effectiveness. As a result, the field of climate change communication suffers from "inverted blind spots": psychologists who focus on effectiveness tend to downplay ethics, while philosophers who focus on ethics tend to downplay the dimensions that contribute to effectiveness (see Lamb & Lane, 2016, pp. 231–234). These blind spots highlight the difficultly of addressing

an issue as multidimensional and multidisciplinary as climate change (Gardiner, 2010; Moser & Dilling, 2007a).

Recently, scholars have begun to address the ethics of climate change communication. Robert Keohane, Melissa Lane, and Michael Oppenheimer (2014) have analyzed the ethics of communicating scientific uncertainty, identifying five moral principles that should govern climate change communication. In a related article, Lane (2014) has examined the ethics of assessing scientific expertise and the norms of "democratic judgment" that should inform the communication and evaluation of scientific uncertainty in relation to climate change. Meanwhile, Lamb and Lane (2016) have developed insights from Aristotle's *Rhetoric* to identify ethical constraints on climate change communication and offer practical guidance on how scientists can communicate both ethically and effectively. These accounts have highlighted the importance of ethics in climate change communication, but the field remains ripe for additional contributions from a wide range of disciplines.

This article aims to make one such contribution by applying the three most influential approaches in moral philosophy—consequentialism, deontology, and virtue ethics—to climate change communication.[6] Since this article is aimed primarily at scientists, policymakers, and environmental advocates,[7] it will leave many of the philosophical details to the side and focus instead on how these three ethical approaches emphasize different kinds of climate change communicators and illuminate specific assumptions related to their communication. Climate change communication, of course, involves a wide set of issues, from assessing trust in expert testimony to increasing public understanding of science and considering science's contribution to public policy. To focus the discussion, this article will analyze three aspects of climate change communication that are especially relevant to scientists, policymakers, and environmental advocates: the relationship between ethics and effectiveness, the ethics of communicating scientific uncertainty, and the ethics of framing. The hope is that a careful consideration of these issues in light of influential philosophical approaches will help to equip communicators with the ability to analyze, anticipate, and address some of the ethical challenges of communicating climate change.

An Ethic of Consequences

Although many scholars do not attend explicitly to the ethics of climate change communication, they are not necessarily insensitive to moral concerns. Most simply assume an implicit ethical framework—*consequentialism*—which identifies, evaluates, and guides right action exclusively according to its overall consequences.[8]

Consequentialists identify various standards by which consequences should be valued and measured. Historically, the most influential version is utilitarianism, which assesses consequences by their effect on overall utility, defined by Jeremy Bentham and John Stuart Mill in terms of pleasure and pain.[9] Subsequent consequentialists have defined "utility" or "happiness" in terms of other standards, such as the realization of subjective desires or preferences or more objective conceptions of welfare or well-being.[10] Whatever their conception of happiness, consequentialists affirm several features of moral reasoning that can illuminate how their approach might apply to climate change communication.

First, as its name suggests, consequentialism identifies consequences as the sole criterion of moral evaluation: all actions must be evaluated or directed according to the events, outcomes, or states of affairs that are promoted or produced. This means that consequentialism is a broadly teleological theory that evaluates and determines the moral rightness or wrongness in light of an action's contribution to a further end or *telos*, such as "utility," "happiness," or "welfare."

Second, and relatedly, consequentialism is a largely "forward-looking" account of moral evaluation and decision-making (Driver, 2001, p. 85; Kymlicka, 2002, pp. 22–23). Because it evaluates all action in light of future states of affairs, it tends to downplay backward-looking considerations, such as who caused a particular outcome or whether it violated any moral principles or rights (Kymlicka, 2002, pp. 22–23). When consequentialists do look backward to determine responsibility or causation, they do so only because holding someone responsible might have better consequences in the future, not because holding them responsible is what they are owed or due.

Third, consequentialism tends to be a maximizing theory: in deciding between various actions, many consequentialists hold that one should choose the action that maximizes the best consequences overall (Jamieson, 2007, pp. 164–165; Kymlicka, 2002, pp. 20–22; Pettit, 1984, 1997, pp. 124–129; Williams, 1973, pp. 85–87). Most consequentialists are thus concerned with promoting value rather than honoring it. Whereas one can honor a value by respecting, exemplifying, or instantiating that value, regardless of whether it produces the best consequences, promoting a value requires optimizing it and thereby bringing about its maximal realization (see Pettit, 1989). Though some scholars hold that promoting value in a "satisficing," or good enough, way is sufficient to justify an action (Slote, 1984),

most consequentialists argue that value must be maximized rather than merely satisficed (Pettit, 1984, 1997, pp. 124–133).

Fourth, consequentialism is an aggregative approach: it insists on aggregating the good of all persons affected by an action, which leads to the influential but occasionally misleading emphasis on the "greatest happiness of the greatest number."[11] This aggregative aspect of consequentialism distinguishes it from ethical egoism, which focuses only on maximizing the good of the individual agent rather than the good of the whole (Driver, 2007, pp. 40–41). Consequentialism, by contrast, requires weighing consequences for all affected.

Fifth, and relatedly, consequentialism is impartial: when aggregating the happiness of all, it does not weigh any one individual's good over another, but treats all equally (Driver, 2007, p. 41; Kymlicka, 2002, pp. 11–12). The implication is that most consequentialist theories are agent-neutral: they do not accord any additional weight to an agent's desires, duties, or relationships simply because they happen to be relevant to the agent (Pettit, 1997). Consequentialism treats the happiness of all persons impartially.

Several of these features account for consequentialism's influence and attraction. Defenders argue, for example, that consequentialism's insistence on impartiality and agent-neutrality reflects an egalitarian commitment to weighing each person's welfare equally, while its principle of aggregation ensures that decisions are right not just for one or a few, but for all.[12] Consequentialism's commitment to aggregation is one reason that many thinkers—including Bentham and Mill—advocate it as an effective means of promoting political reform and challenging a status quo that favors elites rather than the masses (Driver, 2007, pp. 42–43, 2014, pp. 8–12; Sandel, 2009, pp. 34–37). It is also why policymakers often consider consequentialist reasoning so suitable to their task. Because it encourages policymakers to maximize consequences for all and supplies a single index by which to measure, compare, and calculate these consequences, consequentialism provides a simple method for making complex moral and political decisions that affect large numbers of citizens (Williams, 1973, pp. 136–137).

These same features also attract adherents in the academy. Until the mid-20th century, consequentialism was the prevailing theory in modern moral philosophy, and it wields a particularly significant influence in the social sciences, especially in economics where the idea of the "utility-maximizer" constitutes the dominant paradigm of a rational human agent. The extent of this influence is particularly relevant for climate change communication. Debates about climate change have occurred largely in and around major international summits, treaties, and protocols focusing on policies for large populations, and economics has dominated discussions of "discounting," "thresholds," and collective action. As a result, much of the social science that informs climate communication is shaped by a discipline that takes consequentialism to be its implicit normative framework.[13]

Consequentialist assumptions are evident, for example, in the way some scholars evaluate the ethics of “framing,” the practice of using narratives, metaphors, and interpretative cues to communicate information in a way that engages a particular audience. In response to concerns that framing might involve unethical deception or manipulation, scholars rightly argue that framing is inevitable and that there is no communication outside of some frame, even if it is the implicit frame supplied by the status quo (CRED, 2009, p. 6; Lakoff, 2010, pp. 71–73; Nisbet, 2009, p. 15). Part of what motivates their emphasis on framing is an attempt to counteract the deceptive framing that climate change skeptics sometimes use to oppose mitigation or adaptation policies (see McCright, 2007; Nisbet, 2009; Weber & Stern, 2011). In recommending alternative frames, however, many environmental advocates do not attend adequately to the ethics of employing particular frames (see Lamb & Lane, 2016, pp. 231–234). Some simply suppose that the inevitability of *some* kind of framing justifies the moral permissibility of *all* kinds of framing, while others assume that whichever communication is most *effective* is the most ethical. The latter position arises not because its defenders necessarily lack an ethical framework, but because they identify consequences as the primary standard of moral evaluation. Since the consequences of climate change are potentially disastrous, they implicitly justify any use of framing as a legitimate way to avert catastrophe.

Consequentialism is implicit even in accounts that analyze distinctly moral frames for communicating climate change. Jonathan Pickering, for example, argues that the “moral language” of justice or equity, while useful in analyzing the ethical dimensions of climate change, may not be as effective in overcoming “motivational obstacles” and encouraging audiences to act (2016, pp. 267–269). He thus recommends the selective and strategic use of other frames and discursive techniques to encourage a moral response. Pickering explicitly argues that “disingenuous rhetoric is by and large undesirable” (2016, p. 263), but his account of how and when to use moral language “effectively” is cast in consequentialist terms of cost-benefit analysis, with a focus on the “effects” or “efficacy” of particular frames (pp. 262–273), the “weighing up” of values (p. 260), and the “moral trade-offs” between “opportunities” and “risks” (p. 273).

The same applies to those who explicitly highlight the ethical dangers of framing. Consider the guidance from the Center for Research on Environmental Decisions (CRED), which indicates that the intention of framing “is not to deceive or manipulate people, but to make credible climate science more accessible to the public” (2009, p. 6). The guide explicitly warns against downplaying uncertainties or making strongly emotional appeals that “may backfire down the road, causing negative consequences that often prove quite difficult to reverse” (CRED, 2009, p. 20). Notice the assumption underlying the claim: the warning focuses solely on the “negative consequences” of misleading and manipulative communication, the potential that it might “backfire” and generate distrust or opposition that undermines its overall effectiveness.

These cases rightly highlight the importance of consequences, which even consequentialism’s strongest critics recognize. “All ethical doctrines worth our attention take consequences into account in judging rightness,” John Rawls writes. “One which did

not would simply be irrational, crazy" (1999, p. 26; see also Williams, 1973, p. 133). Consequences seem especially relevant to the ethics of climate change communication. Given climate change's potentially dangerous effects on the entire planet, considering the effectiveness of environmental communication is a moral, and not simply practical, imperative.

Yet these cases also help to illuminate the limits of consequentialism when applied to climate change communication. One difficulty relates to the predictability of consequences themselves. Critics argue that, given the limits of human knowledge, predicting the consequences of every action far into the future is difficult, if not impossible. Actions that we think may have good consequences in the short term may have devastating outcomes in the long term, while actions that seem ineffective in the short term may create the conditions for more lasting change. Moreover, consequentialism requires assessing consequences not just for the individual agent but for all affected, which makes calculation more difficult. The problem of predictability might be especially acute for climate communicators since climate change is currently "the world's biggest collective action problem" and involves so many different types of uncertainty (see Jamieson, 1992, pp. 142–151, 2007, pp. 165–168; Lane, 2014).

This concern about predictability relates to a second challenge: commensurability. Because consequentialism requires the aggregation of consequences, it entails that diverse goods, values, and consequences must be calculated, compared, and weighed according to a single scale, often an economic one, which is frequently used to weigh costs and benefits (see Kymlicka, 2002, p. 17; Sandel, 2009, p. 41; Dietz, 2011). Critics argue that reducing all values to a single currency denies the differences between persons and the irreducible diversity of goods and values, which cannot be compared adequately or fairly through a simple quantitative method (see Sandel, 2009, p. 41; Sinnott-Armstrong, 2015). Commensurability poses a particular challenge for climate change communicators: How can one calculate and compare the value of a human life, a species, or the entire planet in the same quantitative terms that one measures the costs or benefits, for example, of economic development? And if one cannot calculate and compare these values according to a single scale, how does one know how to weigh the consequences when possible goods at stake—such as the survival of the planet—conflict with the effects of communication on a particular audience? Environmental consequences seem impossible to weigh on a single scale (Dietz, 2011; Jamieson, 1992, 2007, pp. 167–168).

Consequentialists have responded to these epistemic problems in several ways. Some, for example, have shifted the focus from *actual* consequences to *foreseen*, *foreseeable*, or *intended* consequences, which makes the procedure for calculating and comparing consequences less demanding (see Sinnott-Armstrong, 2015). Others concede the challenges of predictability and commensurability but argue that consequentialism is no worse on this front than other ethical theories. Any ethical framework that includes consideration of future consequences will encounter similar epistemic difficulties (Bailey, 1997, pp. 13–15, 18–20; Driver, 2001, p. 85; Kagan, 1998, p. 64; Kymlicka, 2002, pp. 18–20). Moreover, even if consequences cannot be calculated or compared with certainty or

precision, we can often make “reasonable, educated guesses” that enable us to act (Kagan, 1998, pp. 45–64, 64–65; see also Kymlicka, 2002, pp. 18–20). The unpredictability and incommensurability of consequences need not lead to inaction or paralysis.

While these replies rightly highlight the importance of consequences and the dangers of singling out consequentialism for its epistemic limitations, consequentialism does not entirely escape critical concern. Since consequentialism is a forward-looking theory that evaluates potential actions solely according to the consequences they promote or produce, it seems more susceptible to this objection than other ethical theories that incorporate other normative factors, such as backward-looking considerations of causation and responsibility or present-directed concerns about instantiating particular values or virtues. This limitation thus points to a more serious and fundamental challenge: because consequences constitute the sole standard of moral evaluation, standard accounts of consequentialism cannot adequately account for other relevant moral considerations (Kagan, 1998, pp. 60–61, 69; Williams, 1973, pp. 93–100, 108–118).

Consider again CRED’s consequentialist warning against misleading communication. While “negative consequences” are a legitimate ethical concern, they are not the only one; other non-consequentialist considerations, such as duties to respect the values and judgment of audiences and to communicate in a way that reflects virtuous character, may also caution against manipulative uses of framing. In its popular forms, consequentialism tends to leave such considerations to the side. Some critics have even argued that narrowly consequentialist calculation is self-defeating: focusing on maximizing consequences at each and every instant involves significant time, energy, and unpredictability and may actually produce worse consequences over the long term than following a rule, respecting rights, cultivating virtues, or relying on other non-consequentialist moral considerations.[14] Such criticisms may caution climate communicators against adopting a consequentialist approach.

Consequentialists have responded to these worries by distinguishing between *direct act-consequentialism*, which evaluates the consequences of acts directly, and *indirect consequentialism*, which evaluates consequences indirectly by focusing instead on non-consequentialist ways of deciding how to act (Alexander, 1985, pp. 317–318; Pettit, 1989, 1997; Railton, 2003; Sinnott-Armstrong, 2015). The intuition is that following a rule, or acting in accordance with a particular virtue, may actually have better consequences in the long run than consciously trying to assess the consequences of each and every act at each and every instant. On this view, maximizing consequences is best achieved indirectly.

This argument for indirect consequentialism depends on a crucial distinction between a *criterion of rightness*, which determines whether an action, intention, or character is morally right or wrong, and a *decision procedure*, which is a way of determining how to act according to the criterion of rightness (Bales, 1971; Railton, 2003; Pettit, 1989, 1997, pp. 155–163; Sinnott-Armstrong, 2015). Direct consequentialists assume that both the criterion of rightness and the decision procedure must focus on assessing the consequences of each act, while indirect consequentialists allow non-consequentialist decision procedures

as long as they maximize the best consequences according to a consequentialist criterion of rightness. The most influential version of indirect consequentialism is “rule-consequentialism,” which holds that following specific rules will maximize positive consequences more than determining the consequences of every single act (see Hooker, 2015). Others have defended “virtue-consequentialism,” which offers indirectly consequentialist justifications for acting out of a particular virtue or character (Crisp, 1992; Bradley, 2005; Driver, 2001; Hurka, 2000). Dale Jamieson (2007), for example, has even applied virtue consequentialism to environmental ethics to suggest that “utilitarians should be virtue theorists.” Still others have advanced a “sophisticated consequentialism” that incorporates multiple non-consequentialist considerations—including rules, principles, and virtues—within the decision procedure to promote actions that cohere with the objectively consequentialist standard of rightness (Railton, 2003). Because indirect consequentialism offers more flexibility and includes a wider range of considerations in the decision procedure, most contemporary consequentialists identify as indirect consequentialists, and some argue that classical utilitarians—such as Bentham, Mill, and Sidgwick—defended a similar view (see Driver, 2014; Jamieson, 2007, p. 169; Pettit, 1997, pp. 101–102; Sinnott-Armstrong, 2015).

Does this mean that climate communicators should be indirect consequentialists? Not necessarily. If indirect consequentialism’s flexibility highlights a potential strength, it also presents a potential weakness. As critics have argued, including non-consequentialist considerations into the decision procedure confronts indirect consequentialism with a dilemma. Consider a case of climate communication when violating a non-consequentialist decision procedure—such as a rule against lying—actually promotes the best consequences in a particular situation. If consequences are what justify accepting the rule in the first place, why should a communicator follow the rule if violating it in this case produces the best consequences? How could she still follow the rule when what justifies it—an appeal to maximizing the best consequences—justifies its violation? But if she violates the rule, indirect consequentialism risks collapsing into direct consequentialism, with all of the attendant problems that indirect consequentialism was developed to avoid. Given this challenge, many critics find indirect consequentialism to be paradoxical and potentially self-defeating.[15]

Even if indirect consequentialists can escape this dilemma by appealing to objective justifications rather than subjective evaluations (Driver, 2001, pp. 68–83; Railton, 2003), it still seems counterintuitive that all moral actions, virtues, and relationships can be objectively justified, if not subjectively determined, solely by an appeal to consequences. Should individuals love their spouses or children only because doing so has good consequences for the greatest number of people, or rather because those acts and relationships are meaningful in themselves (Oakley, 1996, pp. 135–137; Stocker, 1997)? Should they keep promises and respect the rights of others only because doing so has the best overall consequences, or because they owe a duty of respect to other persons (Kymlicka, 2002, pp. 26–29)? More specifically, should climate communicators communicate only in ways that maximize the best consequences, or should they also

consider what they *owe* to audiences as a matter of respecting their rights and agency? The intuition is that one might have moral reasons to communicate climate change in particular ways that cannot be plausibly justified by, or reduced to, an appeal to consequences. The idea that ethics cannot be reduced solely to considerations of consequences is what informs alternative approaches.

An Ethic of Principles and Duties

A second prominent approach is *deontology*, which comes from the Greek word, *deon*, meaning “duty” or “obligation.”[16] In contrast to consequentialism, deontology identifies the rightness of an action by its conformity with moral principles, rules, or duties, which are often understood to be universal. In evaluating the moral quality of acts themselves rather than their consequences, most forms of deontological ethics identify specific acts that are morally required or prohibited, even when they might not lead to the best consequences. Deontology thus emphasizes “honoring,” “respecting,” or “instantiating” moral values rather than “promoting,” “producing,” or “maximizing” them (Baron, 1997, pp. 18–32). On this deontological picture, an ethical climate change communicator is one who communicates according to specific moral rules and principles that respect the agency and autonomy of audiences rather than one who seeks only to maximize the positive consequences of communication.

Deontological approaches wield a powerful influence in contemporary moral philosophy and popular discourses around dignity and human rights (Sandel, 2009, pp. 103–105). Many of the most influential political philosophers over the last 50 years—from liberal egalitarians to libertarians—stand within the broadly deontological tradition, which takes its modern inspiration from Immanuel Kant.[17] A brief sketch of Kant’s somewhat abstract approach can illuminate the kind of ethical climate change communicator that a prominent form of deontology might recommend.

Writing in the late 18th century, Kant developed his account of morality in direct opposition to the consequentialism prevalent at the time. Kant not only believed that it was difficult to calculate and compare possible consequences, but he also held that consequences, along with subjective desires, emotions, and inclinations, cannot serve as an objective and secure “ground of morality” (Kant, 1996A, 4:401, 4:442).[18] If morality is to be “universal” and “unconditional” and hold equally for all rational beings, then the moral status of rights and duties cannot be vulnerable to contingent consequences or circumstances, nor used simply as means to ends of “happiness” or “utility” imposed from the outside. Rather, morality must be determined *a priori*, according to a “pure practical reason” universally accessible to all human beings and prior to any contingent consequences that happen to occur or any subjective inclinations that individuals happen to have (Kant, 1996A, 4:387–390, 4:428–429, 4:442–445; Sandel, 2009, pp. 106–116). Otherwise, morality would impinge on the capacity of rational agents to choose their own ends, which he identifies as the defining feature of rational beings, the ground of human “dignity” (Kant, 1996A, 4:434–436). For Kant, then, “autonomy of the will” is the “sole principle of morals” (1996a, 4:441). Any universal moral law must accord with the autonomy of the will; it must be a law that rational agents can give to themselves.

If autonomy of the will gives human beings the capacity to determine the universal moral law, it also sets the limits of their agency. As both “author” and “subject” of the moral law, they must act in conformity with the moral law that they themselves give; otherwise, they will undermine the very ground of their own agency and violate the autonomy of others (Kant, 1996A, 4:431–433, 4:440). Kant’s commitment to autonomy thus grounds his famous “categorical imperative,” the universalizable principle that serves as the objective basis of his deontological ethics (1996a, 4:433–434). Morality requires human beings to act in ways that accord with the categorical imperative, whether or not it maximizes the best consequences (1996a, 4:394–397, 4:399–401). Indeed, for Kant, consequences themselves have no absolute “moral” worth and therefore should not enter into considerations about how to act according to the categorical imperative.

Kant offers multiple versions of the categorical imperative, but two are most relevant for climate change communicators. The first—the so-called Formula of Universal Law—is a test of universalizability: “act only in accordance with that maxim through which you can at the same time will that it become a universal law” (Kant, 1996A, 4:421). In other words, when deciding whether and how to act, communicators should formulate the intention behind their proposed action as a specific maxim and then reflect on whether that maxim can be universalized as a law that everyone can accept. If the maxim avoids any contradiction, it is a permissible principle upon which to act, and the action is morally right. But if the maxim fails this test of universalizability, it is ethically impermissible (Driver, 2007, pp. 87–88). The example of a lie illustrates Kant’s intuition. Suppose a climate communicator intentionally deceives her audience to acquire support for a new environmental regulation. According to Kant, telling such a lie would be impermissible because the maxim it assumes—“I will lie to my audience to win their support for the regulation”—cannot be universalized. To universalize the maxim would imply a contradiction: to will that telling a lie become a universal law would be self-contradictory since, if everyone applied the maxim, no one would believe what anyone says. Universalizing the maxim would generate distrust and undermine all communication (Kant, 1996A, 4:402–403, 4:422–423).[19]

Some critics, including John Stuart Mill, argue that Kant’s view relies on an implicit consequentialism. To say that lying is prohibited because trust will be undermined is to appeal to the long-term “*consequences* of their universal adoption,” not to an abstract, *a priori* principle (Mill, 2001, pp. 3–4). According to Mill, Kant relies on an appeal to consequences even as he rejects their moral relevance. Kant, however, is appealing not simply to the negative consequences of the lie but to the presuppositions of acting rationally at all. If the climate communicator is to act according to a law that she can give herself, she cannot rationally act on a maxim that she cannot will to be universalized since such a maxim would subvert what makes her a rational agent in the first place. It would place her outside the bounds of the universal moral law to which she, as a rational agent, is subject (Kant, 1996A, 4:402–403, 4:431–434). Moreover, it would be *unfair* to her audiences and other communicators: to exclude herself from a maxim that she otherwise thinks should be applied universally would violate the duty of fairness (Kant, 1996A, 4:403,

4:424; Driver, 2007, p. 96; Sandel, 2009, p. 121). Contrary to what Mill suggests, it is the intention behind the action, more than the contingent consequences, that motivates Kant's concern.

Kant's emphasis on the intention of agents and the autonomy of audiences has particular relevance for climate change communication: it highlights a crucial distinction between *persuasion* and *manipulation* that can often be obscured in consequentialist approaches that focus only on increasing the effectiveness of communication. On a deontological approach, to persuade an audience is to present ideas, arguments, and appeals in such a way that the audience is enabled to make an autonomous judgment about how to act. Persuasion thus requires respect for others' autonomy. Manipulation, by contrast, bypasses this rational capacity. It involves presenting ideas, arguments, and appeals in a way that prevents audiences from having the information they need to make rational judgments and act autonomously. On a deontological account, what makes manipulation wrong is not that it may have bad consequences that "backfire" down the road, but that it reflects the wrong intention and fails to provide the kind of respect that human beings are owed by the virtue of being autonomous rational agents. By withholding relevant information, or presenting false or distorted information, manipulation violates an audience's autonomy and undermines their ability to judge (see Keohane et al., 2014, pp. 352–353; Lamb & Lane, 2016, pp. 231–234). An appeal to respect for autonomy thus provides a way to distinguish persuasion from manipulation in a way that simple appeals to consequences do not.

Critics concerned about the severe consequences of climate change, however, may still worry that Kant's obsession with the "good will" and "autonomy" of agents is inherently self-regarding (Jamieson, 2007, pp. 161–163). Should climate communicators be so focused on the purity of their own intentions and the universalizability of their actions that they ignore the massive consequences of climate change for the planet? The result could be disastrous. This concern is common not only among consequentialists but also among "victim-centered" deontologists who worry that focusing on an agent's duties ignores the rights of victims and the harms done to others, moral considerations that are especially relevant in the case of climate change.[20]

Kant's second formulation of the categorical imperative, however, provides support for a more patient-centered or victim-centered approach (Alexander & Moore, 2015). The idea that animates his so-called Formula of Humanity is the principle of respect: "So act that you use humanity, whether in your own person or in the person of another, always at the same time as an end, never merely as a means" (1996a, 4:429; see also Driver, 2007, p. 96). On this account, communicators ought to act in ways that respect the dignity and rights of persons, and since what confers dignity is the rational capacity of a person to make autonomous decisions, they should act in ways that respect the autonomy of their will.[21] Consider the case of lying again. On the Formula of Humanity, what makes the act of lying wrong is that it treats others as mere means to our own ends rather than giving them the information they need to make their own decisions as rational beings with autonomous wills (Kant, 1996A, 4:429–430). Again, it is not the consequences of telling a lie

that leads to the moral wrong, but the lack of respect expressed through the lie. A lie fails to respect others' rights and dignity as persons, a commitment that is especially important in democracies that rely on the participation and judgment of self-legislating citizens.

Such a commitment to telling the truth and preserving audiences' autonomy has led some climate communicators to argue that scientists should avoid persuasive communication altogether. Baruch Fischhoff, for example, worries that any attempt at "public advocacy" leads climate scientists to follow the "norms of politics" and thereby violate the "norms of the scientific community," which require scientists to "identify uncertainties, consider all data (and not just supporting evidence), and update their beliefs as new evidence arrives" (2007, p. 7205). To conform to these norms, Fischhoff argues that scientists must practice "non-persuasive communication," providing "credible, relevant, comprehensible information" that will enable the public to make "reasonable choices" when responding to climate change (2007, p. 7208). By "giving citizens a voice" and "letting the science speak for itself," Fischhoff contends, non-persuasive communication discourages the kind of political advocacy that breeds distrust and turns "scientists into peddlers rather than arbiters of truth" (2007, pp. 7204, 7206, 7208). Though Fischhoff appeals to scientific and democratic norms to ground his approach, it might also cohere with Kantian approaches that invoke universalizable principles to prohibit lying or manipulation out of respect for the rationality and autonomy of audiences.

Fischhoff's defense of non-persuasive communication highlights the difficulties that accompany the dual functions of climate change communication. As previously discussed, climate communication must serve an "analytical" or informational role that informs the public about climate change and a "motivational" role that persuades the public to act (Pickering, 2016, pp. 259–263). Fischhoff suggests that climate scientists should only inhabit the first role: they should only be analysts and "messengers" of scientific information, not "advocates" of particular policies (2007, p. 7205). His position implies that climate scientists should abandon the motivational role altogether.

One way to respond is to acknowledge that scientists often occupy more than one role. Most climate scientists are not only scientific researchers but also teachers and professors, and all are citizens of some political community (Jamieson, 2014, p. 70). Their role as scientists need not always trump their role as teachers or citizens. Sometimes, they may be needed, even obligated, to draw on their scientific expertise to advocate policies that concern the wider community.

To his credit, Fischhoff concedes that scientists "who avoid science advocacy can still engage in value advocacy by speaking about things they cherish" (2007, p. 7208). He points to their advocacy of "science films and centers" and their "special sense for the uniquely meaningful features of the world around" (2007, p. 7208). But if scientists cherish the health of their local ecosystems or the beauty of their local landscapes, why

should they be discouraged from advocating on behalf of those values in the case of climate change when their expertise is so relevant to protecting and preserving them?

Fischhoff's answer points to the importance of trust. In encouraging climate scientists to avoid "advocacy" and focus instead on researching and reporting "facts" (2007, pp. 7205–7206), Fischhoff implies that scientific "facts" possess an objectivity and authority that can be undermined by the influence of "values." Yet such a position seems to rely, at least rhetorically, on an implicit dichotomy between "facts" and "values," which philosophers of science have long challenged. On their view, "facts" and "values" are entangled and not easily separable; "values" influence which "facts" are deemed to be relevant or important and how those "facts" are perceived, interpreted, and reported by different audiences and observers (see Langford & Lane, N.D.; Putnam, 2002). For this reason, Heather Douglas (2009) has argued that the "value-free ideal" often attributed to science is both untenable and undesirable. Scientists often do—and should—rely on both epistemic and ethical values, not only when deciding which research to undertake but also when interpreting which evidence is relevant, making judgments about uncertainty and risk, and considering the use of their research and consequences of potential errors, all of which entail that scientists have "moral responsibilities" that accompany their epistemic and professional roles (Douglas, 2009, pp. 66–86). But often scientists enforce strict separations between "science" and "policy" (or "advocacy") in order to protect the "objectivity," "authority," and "integrity" of science and thereby ensure that it is a trustworthy source of information. Douglas affirms the importance of preserving the integrity of science, but she argues that paradigms that enforce strict separations between "science" and "policy," or between "risk assessment" (perceived as an empirical, value-free analysis of the nature of risks) and "risk management" (perceived as a value-laden form of deliberation and decision about how to manage risks), neglect the ways that values inevitably enter into both the assessment and management of risk (2009, pp. 133–155). Rather than denying or masking the role of values in the scientific enterprise, Douglas argues that scientists should explicitly acknowledge those values, which, in turn, would make those values (and the decisions and proposals based upon them) available for public consideration and deliberation. Such transparency can increase the democratic participation and accountability essential to well-functioning democracies. It can also help policymakers and citizens distinguish those who recognize the limited, "indirect" role of values in influencing decisions about uncertainty and risk from those who invoke their values "directly" to replace any scientific evidence that does not fit with their predetermined conclusions or, as Fischhoff worries, who focus only on "supporting evidence" rather than examine all of the data (Douglas, 2009, pp. 133–155; Fischhoff, 2007, p. 7205). According to Douglas, it is this latter, "direct" role of values in supplanting or disregarding scientific evidence that threatens the integrity of science and its role in influencing public policy. By contrast, recognizing and communicating the limited, "indirect" role of values can actually help to preserve the integrity and authority of science while increasing public engagement and accountability (Douglas, 2009, pp. 133–174).[22]

Recognizing the entanglement of facts and values in science has several implications for the ethics of climate change communication. First, it highlights that the role of a climate change communicator is not purely scientific but also entails moral and political responsibilities. If scientific analysis involves value-laden decisions about how to interpret and report scientific evidence and uncertainty accurately and accessibly to diverse audiences, then communicating the nature of environmental risks—risks of what? risks to whom?— involves considerations of value. Part of a climate change communicator's role is not only to present scientific information to diverse audiences but also to facilitate public debate, political deliberation, and policy formation, all of which necessarily involve moral and political values (Keohane et al., 2014; Lamb & Lane, 2016; Lane, 2014).

Of course, scholars such as Fischhoff may grant that climate communicators occupy complex and distinct roles in our political landscape, but maintain that scientists engaged directly in research should not occupy one of those roles, lest they undermine the authority and trust placed in science. Research, however, is not the only legitimate activity of scientists. While some scientists may be more equipped and inclined to focus only on research and expert communication of scientific fact, others may be more equipped and inclined to make science accessible and persuade audiences to act. Recovering a diversity of roles and a corresponding division of communicative labor might provide ways to address these challenges while recognizing legitimate roles for both the persuasive and non-persuasive communication of science (Douglas, 2009, pp. 66–86; Jamieson, 2014, p. 70; Keohane et al., 2014, pp. 348–351; Lamb & Lane, 2016, p. 248).[23]

Relatedly, recognizing the entanglement between facts and values might encourage climate change communicators to be more transparent about the moral values and assumptions that inform their risk assessments and policy proposals. Such transparency could increase democratic accountability and participation while providing ways to distinguish responsible communicators from irresponsible communicators. Rather than masking the role of values or presenting scientific conclusions and policy recommendations as "value-free," acknowledging the role of values could help the public see the differences between communicators whose values enter their decisions in appropriate ways and those, such as some climate change skeptics, who allow their moral and political values to replace or distort their interpretations of relevant scientific evidence. Making values and virtues explicit can even be a way to increase trust in communicators, particularly when conflicts between putative "experts" undercut the default attitude of trust typically shown to scientists (Fiske & Dupree, 2014; Lamb & Lane, 2016, pp. 241–250).

This approach to increasing trust challenges those who assume that "credible" or "trustworthy" communication is primarily a function of intellectual competence that avoids advocacy or persuasion. Contrary to what Fischoff implies, recent research has shown that trust is not merely a function of perceived expertise or scientific objectivity. As Susan Fiske and Cydney Dupree (2014) argue, the credibility of climate communicators depends not only on perceptions of *competence*, but also on perceptions of *intent*. Their studies show that many scientists and researchers are perceived as "competent but cold,"

as possessing expertise but lacking good intent toward their audiences (Fiske & Dupree, 2014, pp. 13595–13596). This problem of "cold competence" poses a challenge for those who hold that "non-persuasive communication" is the best way to earn trust. Engaging emotions and revealing character—which are both aspects of persuasive communication—may also be necessary if climate communicators hope to alleviate distrust and encourage audiences to take their scientific findings seriously (Lamb & Lane, 2016, pp. 241–250; see also Chess & Johnson, 2007; Leiserowitz, 2007; Moser, 2007, O'Neill & Nicholson-Cole, 2009).

The problem of "cold competence" points to a challenge for deontological approaches to climate change communication more generally: in order to ground morality in universalizable principles of "pure practical reason," some deontological approaches downplay the role of emotions and character, which are the very dimensions that communicators may need to persuade audiences about climate change. Kant, for example, is frequently criticized for arguing that moral actions must be solely done "from duty," from the impartial, agent-neutral dictates of reason rather than from any moral emotion or inclination that reflects the dispositions, relationships, or special obligations of particular individuals. Recently, commentators have attempted to rescue Kant from the most extreme of these charges (see Baron, 1997; Cureton & Hill, 2015; Sherman, 1990), but many of Kant's followers still emphasize largely cognitive conceptions of practical reason that downplay the influence of emotions and thereby leave climate communicators without adequate conceptual resources to evaluate and motivate persuasive communication.

Committed Kantians, however, still have one resource that might dispel these worries and offer a more nuanced approach to climate communication: the distinction between *categorical* and *hypothetical imperatives*. While Kant argued that moral actions must be based on the "categorical imperative" and not violate this *a priori* principle, he recognized that diverse agents will have different goals, emotions, and inclinations they hope to pursue (1996a, 4:414–416). These contingent goals can generate "hypothetical imperatives" that take the form of a conditional: "*If* I want X, *then* I should do Y." Although actions based on hypothetical imperatives cannot have absolute or intrinsic moral worth, Kant held that it is still permissible to follow them as long as doing so does not violate the categorical imperative (1996a, 4:397–399, 4:428, 4:439). In other words, the categorical imperative puts an absolute limit or constraint on instrumental actions done from hypothetical imperatives, but pursuing an instrumental goal is morally permissible as long as it does not violate individual autonomy or treat persons as mere means to ends (Driver, 2007, pp. 83–87).

Kant's distinction contains a salutary insight for climate communicators who endorse a universalizable principle of honesty but see persuasion as a legitimate goal: they may be able to employ emotional appeals, frames, and other relevant principles to persuade audiences as long as doing so does not violate the moral constraints imposed by the categorical imperative. Such a view seems compatible with the approach advanced by Keohane et al. (2014). Affirming "a fundamental belief in equal human dignity," they base

their approach on principles of “mutual respect” and “reciprocity,” which encourage fair treatment, active listening, and “mutual engagement” between communicators and audiences (2014, p. 348). With these general principles in view, they then identify five specific principles that should govern climate communication under conditions of uncertainty:

> **(1)** *Honesty*: not lying or intentionally deceiving one’s audience, as well as avoiding deliberately misleading incompleteness or manipulation involving deception.
> **(2)** *Precision*: providing as precise as feasible a description of scientific findings.
> **(3)** *Audience relevance*: communicating clearly about issues that have implications for public policy in such a way that members of the intended audience can draw valid inferences for policy and policy advocacy.
> **(4)** *Process transparency*: providing a clear description of the scientific process of inference, and the process of peer review, in such a way that scientifically qualified members of the audience could check the validity of the conclusion for themselves.
> **(5)** *Specification of uncertainty about conclusions* (2014, p. 352).

While all five principles are important, they argue that honesty has a different status than the others: it is a “categorical imperative” or “deontological requirement” that applies to scientists in “an unconditional way” (Keohane et al., 2014, pp. 353, 364, n16). Honesty must be respected “both for the long-term consequentialist reason of maintaining credibility and because honesty is intrinsic to science as well as an essential component of respect for persons” (2014, p. 362). The other four principles, by contrast, are not intrinsic and unconditional, but conditional and instrumental—they are directed toward the goal of “effective scientific communication to audiences” (2014, p. 360). These ethical principles, then, are *hypothetical* imperatives, principles that direct communicators toward the instrumental goal of persuasive communication that is “accessible to and assessable by its audiences” (O’Neill, 2002, p. 186; cited by Keohane et al., 2014, p. 350).

That these last four principles are hypothetical imperatives has two implications. First, they can never be invoked or applied in a way that would violate the categorical imperative of honesty and the deontological constraints it places on communication. Honesty takes “absolute priority” (Keohane et al., 2014, pp. 349–353, 357, 359). But above that threshold, second, these hypothetical imperatives generate *prima facie* duties that can be subject to various trade-offs (2014, p. 359). Applying the principle of precision, for example, might involve providing overwhelming amounts of intricate scientific data or using technical jargon that would make a message unintelligible to a lay audience, which would violate the principle of “audience relevance” (2014, p. 354). According to Keohane et al., all four of these principles might entail conflicts in which communicators must decide how to best honor and promote specific principles in light of the particular situation and needs of the audience (2014, pp. 359–361). In such cases, they can make trade-offs between these four principles as long as they do not violate the categorical imperative to be honest.

The potential for conflicts between *prima facie* duties highlights one common limit of deontological approaches that focus only on identifying relevant principles: principles do not necessarily come with prepackaged guidance about how, when, and where to apply them in specific circumstances, particularly in cases of conflict. Virtue ethicists often highlight this limitation to argue that specific virtues of intellect and character—particularly practical wisdom—are needed to honor, instantiate, and apply moral principles properly in concrete and contingent circumstances. Keohane et al. recognize this. They describe honesty, for example, not only as a principle, but as a "virtue" that "requires the cultivation of the habits and practices that can help one to keep oneself honest" (2014, p. 353). They go on to quote a virtue ethicist's description of honesty: "it is not sufficient for honesty that a person tell whatever she happens to believe is the truth. An honest person is *careful* with the truth. She respects it and does her best to find it out, to preserve it, and to communicate in a way that permits the hearer to believe the truth justifiably and with understanding" (Zagzebski, 1996, p. 158; cited by Keohane et al., 2014, p. 353; Lane, 2014, pp. 107–108). Of course, to practice honesty in this more complex way and make good decisions in the face of conflicts, communicators need another virtue —"practical intelligence"—to discern the relevant features of a situation, deliberate about the relative weight of competing moral values or principles, and determine how to act in that specific circumstance (Keohane et al., 2014, p. 361). Without practical wisdom—and the experience, self-awareness, and self-reflection needed to cultivate it—communicators will not know how best to act in particular circumstances, even if they know which abstract principles to follow.

Yet even if communicators possess the *intellectual* or *epistemic* virtue of practical wisdom and have knowledge of relevant principles, they also need other *moral* virtues to act rightly and ensure that their dispositions, emotions, and relationships are ordered to the appropriate aims and ends. Otherwise, they may know the right thing but not have the motivation to do it. The need to motivate moral action and cultivate other virtues animates the third approach.

An Ethic of Virtues

While the virtue tradition stretches back to ancient Greece and Rome in the West, it re-emerged as a prominent alternative to consequentialism and deontology in the mid-20th century when philosophers began recovering ancient and medieval insights to challenge dominant modes of modern moral philosophy (Anscombe, 1997; Foot, 1978; MacIntyre, 1984; for discussion, see Chappell, 2013). Over subsequent decades, virtue ethics has become an influential theory in contemporary moral philosophy and been extended to include comparative insights in a variety of intellectual, moral, and religious traditions, including Buddhism, Confucianism, and Islam (see Bucar, 2015; Carr, Arthur, & Kristjánsson, 2017; Cokelet, 2016; Flanagan, 2015; Ivanhoe, 2013; Slingerland, 2015; Swanton, 2013). This significant variety and scope make considerations of virtue particularly relevant in the

international context of climate change communication, where communicators and their audiences are informed by diverse moral traditions. Yet, while virtue ethicists now draw insights from a wide range of thinkers, Aristotle remains an influential source and touchstone for virtue ethics in contemporary and comparative perspective and thus provides a useful entry point into the relevance of virtue for climate change communicators.[24]

In the *Nicomachean Ethics*, Aristotle identifies the ultimate aim, or *telos*, of human life as *eudaimonia* (1999, 1.7–8), often translated misleadingly as "happiness." A better translation is "flourishing," the proper functioning of a being of a certain kind. To flourish as a human being is to achieve a kind of "virtue" or "excellence" (*arête*) in the character, actions, and relationships that constitute a distinctly human life (Aristotle, 1999, 1.7–8). This idea of flourishing captures a more objective sense of human well-being than the subjective connotations often associated with modern notions of "happiness," including those that sometimes characterize other ethical theories (Hursthouse, 2013; Lane, 2012, pp. 101–107).

In order to flourish, Aristotle believed that we must consistently perform the right actions, hold the right attitudes, and develop the right relationships. But to act, feel, or think rightly on one occasion or in one domain is not sufficient for flourishing. We must act rightly across various circumstances and contexts, and to do that consistently we need the *virtues*, stable and enduring habits that regulate these actions, attitudes, and relationships and help us avoid their corresponding vices (Aristotle, 1999, 2.1–6). The virtues enable us to think, feel, and act "at the right times, about the right things, toward the right people, for the right end, and in the right way" (Aristotle, 1999, 2.6.10–12, 2.9).

While Aristotelian virtue ethics affirms the importance of right action, it differs from consequentialism and deontology in that it does not necessarily make justifying actions according to an independent criterion of rightness an essential part of its theoretical and developmental framework (see Annas, 2011, pp. 41–51; Chappell, 2013). For many virtue ethicists, an appeal to an independent standard of rightness remains too vague and indeterminate to inform and evaluate ethical action. As a result, they focus on a wider range of specific virtues and vices that enables a more specific and contextualized account of moral character, action, and motivation in particular circumstances (Annas, 2011, pp. 41–51; Anscombe, 1997). It is more helpful and precise, they argue, to describe actions as courageous or cowardly, humble or arrogant, temperate or intemperate, just or unjust, and so on, rather than simply as right or wrong. Virtue ethicists thus fill out their account by attending to specific virtues and vices that relate to different domains and types of actions, attitudes, and relationships.

Recently, a number of philosophers have applied a virtue-based account to environmental ethics to identify the specific virtues required to support and sustain our ecosystem (e.g., Hursthouse, 2007; Lane, 2012; Sandler, 2007; Zwolinski & Schmidtz, 2013). Yet, like consequentialist and deontological forms of ecological ethics, many accounts of

environmental virtue ethics have not yet directed significant attention toward climate change communication.

Several moral virtues are relevant for informing and regulating the distinctive acts, attitudes, and relationships that characterize climate change communication. Thomas Aquinas's account of the virtues, informed by Aristotle's, offers one of the most useful accounts for climate change communicators. Though the nature of virtue remains a contested question and significant differences exist between Aristotle's Greek conception of the virtues and Aquinas's adaptation, Aquinas offers a systematic and expansive analysis of the acquired moral virtues, which, he holds, can be cultivated and exercised by people from a variety of different traditions.[25] A brief survey of Aquinas's moral virtues can thus supply useful analytical scaffolding for identifying virtues most relevant to climate change communication.

Since communication is inherently interpersonal, one of the most important virtues is *justice*, which regulates our external actions and relationships with other persons (Aquinas, 1948, II–II.58). Justice ensures that each person is given what they are due, whether that is respect for their dignity or, in democratic societies, their ability to deliberate and influence politics and public policy. Since climate change communication involves sharing information and engaging in dialogue on issues on which citizens are asked to decide, justice is an especially important virtue for communicators in democratic contexts. As a virtue of character, justice not only directs communicators to the relevant principles of equality and respect, as deontological approaches do, but it also disposes the *will* of communicators to act justly across a wide variety of circumstances (Aquinas, 1948, II–II.58.4). This aspect of the virtue of justice is essential, for even if communicators know what principles of justice require, they still need the motivation and resolve that the virtue supplies to do it.

Truthfulness, or *honesty*, is a more specific virtue related to justice (Aquinas, 1948, II–II. 109). Like justice, it involves giving another what they are due, but with specific reference to the truth that others are owed. The virtue of honesty or truthfulness thus involves acting virtuously in respect to how one communicates the truth to others (Aquinas, 1948, II–II.109). As mentioned in the discussion of Keohane et al. (2014), on a virtue account, honesty is not only a principle to be applied, but a more complex capacity that disposes a communicator to share the truth properly across a wide variety of circumstances to a wide range of audiences (Keohane et al., 2014, p. 353; Lane, 2014, pp. 107–108; Zagzebski, 1996, p. 158).

That the virtues of justice and honesty involve the *motivation* to act, not simply the knowledge of principles, means that communicators also need virtues that regulate their emotions and steady their resolve in the face of difficulties (Aquinas, 1948, II–II.123.1). If a communicator knows what is just or truthful but is not courageous enough to challenge popular opinion or tell difficult truths, justice will not be done. A communicator thus needs the virtue of *fortitude* or *courage* to act virtuously in the face of difficulties or dangers that prompt some kind of fear (Aquinas, 1948, II–II.123). Courage enables

communicators to respond properly to dangers and difficulties that cause fear without being too cowardly, on the one hand, or too rash, on the other (Aquinas, 1948, II–II.123, 125–27).

Communicators also need more specific virtues related to courage to fortify their will. The virtues of *patience* and *persistence*, for example, can help communicators endure difficulties and delays that might tempt them to give up in the face of spirited opponents or unresponsive audiences (Aquinas, 1948, II–II.136–137). Similarly, the virtue of *magnanimity* can regulate communicators' hopes to achieve future goods that are difficult to attain and thus help them maintain resolve in the face of difficulty, resisting both the despair that might arise from widespread inaction and the presumption that might arise from a misplaced hope that simply explaining the scientific facts will move an audience to action (Aquinas, 1948, II–II.129–130, 133; see Lamb, 2016A, 2016B). At a time when many climate communicators are tempted toward despair and when fear appeals have been shown to be counterproductive when not combined with more constructive guidance (CRED, 2009, pp. 20–23; Markowitz & Shariff, 2012; Moser, 2007; Moser & Dilling, 2011, pp. 164–165; O'Neill & Nicholson-Cole, 2009), a virtue that perfects the passion of hope and resists the vices of presumption and despair may be especially important for climate communicators.

If courage, patience, persistence, and magnanimity function to fortify motivation and resolve in the face of difficulty, communicators also need virtues that restrain excess, particularly excesses that lead to injustices (Aquinas, 1948, II–II.123.1, II–II.141.2–3). The virtue of *temperance* can serve this function, moderating desires for particular goods—such as pleasure, wealth, or honor—that might distort judgments or cause communicators to treat others unjustly in order to achieve these goods (Aquinas, 1948, II–II.141). Since honor and prestige remain the currency of the academy, where much research on climate science and communication occurs, climate communicators may especially benefit from a kind of temperance that regulates a desire for honor or recognition. Otherwise, they may tempted to be too confident in their own ideas and unwilling to listen to others, or eschew valuable forms of research or advocacy that might not earn them as much prestige from academic colleagues.

For this reason, temperance is related to the more specific virtue of *humility*, which tempers the desire for honor and encourages an accurate self-estimation of strengths and weaknesses (Aquinas, 1948, II–II.161). As Aristotle recognized, humble communicators are typically more likely to listen to others, more open to learning from those with different views and values, and more willing to make sacrifices of prestige, power, or wealth to show their fellow citizens they are committed to the common good rather than their self-interest (Allen, 2004, pp. 152–154; Aristotle, 1999, 5.10.8; 2006, 2.3.6–8; Lamb & Lane, 2016, pp, 248–249). Such humility is especially relevant for climate communicators given the problem of "cold competence." If climate researchers are often credited with self-interested motives to demonstrate superiority, acquire research money, or advance an ideological agenda rather than promote the good of the larger community (Fiske &

Dupree, 2014, p. 13596), the virtue of humility can help to dispel these perceptions, enabling communicators to demonstrate their commitment to mutual dialogue, their openness to audiences' judgment, and their willingness to make sacrifices for the common good (Lamb & Lane, 2016, pp. 248–249).

Of course, exercising these moral virtues and avoiding their corresponding vices will also require another virtue: *prudence* or *practical wisdom*, the intellectual virtue that enables communicators to discern the relevant features of circumstances, identify salient moral considerations, and make practical judgments about how to think, feel, and act in particular circumstances (Aquinas, 1948, I–II.58.4–5, II–II.47; Aristotle, 1999, 6.5–13; Hursthouse, 2006; Russell, 2009; Swartwood, 2013). Without practical wisdom, communicators would not know how to act justly and communicate honestly with external audiences, nor would they know how to regulate their internal dispositions to communicate courageously, temperately, and humbly in the face of difficulties. Practical wisdom functions to guide and direct all of the virtues (Aquinas, 1948, I–II.57.5, 58.4; Aristotle, 1999, 6.13).

Despite its essential role, however, practical wisdom is not sufficient on its own. If "we cannot be fully good without prudence," Aristotle argues, we also cannot be "prudent without virtue of character" (1999, 6.13.6; see also Aquinas, 1948, I–II.58.4–5). Since perceptions and judgments may be distorted by unjust relationships and disordered desires, practical wisdom requires the cooperation of other virtues for its proper exercise. Without the other moral virtues, communicators would not be able to recognize the most salient features of situations, choose the proper ends, or reliably pursue the ends they know are right (Aquinas, 1948, II–II.58.5). In this way, all of the virtues must cooperate to reliably dispose communicators to act virtuously across a wide range of circumstances. This idea is often described as the "unity," "reciprocity," or "interconnectedness" of the virtues (see Annas, 2011, pp. 83–99; Hursthouse, 1999, pp. 153–157; Russell, 2009, pp. 335–373).

Many critics, however, dismiss the interconnectedness of the virtues as unrealistic and overly demanding. If fully possessing one virtue requires possessing all of the others, they argue, human beings cannot be expected to possess any of the virtues, and thus virtue ethics becomes either impossible or irrelevant. This worry may be especially salient among climate communicators: How can a communicator be expected to cultivate, much less exercise, all of the virtues all of the time, particularly if they must be constantly learning from experience and engaging diverse audiences?

Such worries about demandingness, however, are overstated. While many virtue ethicists assume that *full* and *perfect* possession of any one virtue requires the full and perfect possession of all of the others, this is an aspirational ideal rather than a description of actual human character (Russell, 2009, pp. 121–130). Even the most devoted virtue ethicists, from Aristotle onwards, acknowledge that moral development occurs across an entire life and that even the most virtuous are imperfect in this life (Annas, 2011, pp. 89–91; Aristotle, 1999, 1.10; Hursthouse, 2013, Russell, 2009, pp. 112–121, 362–363). Rather

than setting an impossible standard, the interconnectedness of the virtues supplies a regulative ideal that aids the education and exercise of virtues and cautions communicators from presuming they are morally perfect just because they have cultivated virtue in one domain. By emphasizing every virtue's dependence on other virtues, the ideal highlights aspects of character that need to be improved and sustained to guide actions, attitudes, and relationships across various contexts (Annas, 2011, pp. 84–90; Russell, 2009, pp. 123–130, 372–373).

The interconnectedness of the virtues also offers another advantage to climate communicators: it supplies a thicker vocabulary of virtue and vice for analyzing actions and ensuring accountability than standard accounts of deontology and consequentialism. Consider a climate communicator who is not afraid to tell difficult truths. He may seem to possess the virtue of courage, but he could fail to act ethically because he provokes a debate with an interlocutor without doing the necessary preparation (a failure of practical wisdom), exaggerates the facts and thus fails to give others the information and respect they are due (failures of justice and truthfulness), or is so confident in his own opinion, or so committed to winning an argument for the sake of honor, that he fails to listen to others or make sacrifices to show his commitment to the common good (failures of temperance and humility). In such cases, recognizing the interconnectedness of the virtues enables audiences to distinguish true virtues from their semblances and offers valuable conceptual resources for identifying how, when, and why a communicator's attitudes, actions, and dispositions are virtuous or vicious (Annas, 2011, pp. 88, 97–98).

Critics, however, may argue that virtue ethics' concern for an individual's character smacks of egoism (Hurka, 2000, pp. 219–256), which may be particularly salient in the environmental context. Given the dangerous effects of climate change, evaluating the ethics of climate change communication with reference to a communicator's character may seem to reflect a narrow obsession with moral purity and thereby obscure the potentially catastrophic consequences that outweigh the character of one individual. On this view, virtue ethics' focus on the flourishing of an agent may seem to be too individualistic and egoistic to offer a useful guide for ethical action, particularly in relation to an issue as global and consequential as climate change.

Such an objection, however, misses several ways in which virtue is inherently social and responsive to morally salient features of the world. First, one of the cardinal virtues is justice, a fundamentally social and relational virtue that directs a communicator's actions towards others in ways that enable them to give others their due, including the information they are due. The primary target of justice is not the agent's good, but the common good shared by all, including the good of the relationship itself (Aquinas, 1948, II–II.58.5). The virtue of justice requires agents to consider what is owed to others across the globe. Second, virtue ethics recognizes that a well-functioning community is a necessary precondition for the virtues. Without virtuous exemplars to emulate, social practices in which to participate, and family and friends to offer instruction and accountability, cultivating the virtues would not be possible. Virtues thus require communal conditions for their education and exercise (Aristotle, 1999, 9.9–12). Third, and

perhaps most significantly, the ideal of flourishing is itself a communal one, a standard that includes the flourishing of the larger community as much as the individual. For Aristotle, Aquinas, and other virtue thinkers, a human person is, by nature, a social being, and, as a result, her individual flourishing is interdependent on the flourishing of the community (Aristotle, 1999, 9.4-1; Aquinas, 1948, II–II.58.5). Individuals are related to the community as parts to a whole (Aquinas, 1948, II–II.58.5). For this reason, climate change's effects on the flourishing of the planet and its population should enter fundamentally into a virtuous communicator's conception of flourishing and, in turn, inform the virtues that contribute to and constitute that flourishing (see, e.g., Lane, 2012, pp. 101–107). Virtue ethics is neither as individualistic nor egoistic as critics assume (Hursthouse, 2013).

Still, critics may worry that an emphasis on character obscures the importance of consequences, which are particularly salient in the case of climate change. The potential consequences of failures to communicate, and properly respond to, climate change could be catastrophic. A virtue-ethical approach, however, can make room for consequences in several ways. First, consequences and effects are typically among the "circumstances" of an action that the virtue of practical wisdom must consider when determining an ethical course of action (Aquinas, 1948, I–II.7, 18.10–11, 21). As Daniel Russell argues, practical wisdom "involves very careful thinking about consequences" both in discerning how to make indeterminate values determinate in particular contexts and deciding how to weigh trade-offs between conflicting goals (2014, pp. 261–262). Thus, without adequate consideration of possible consequences, a communicator would lack the practical wisdom that is central to virtue ethics. In this way, virtue ethics includes a consideration of consequences without making consequences the sole or supreme moral consideration (Russell, 2014, pp. 258–259).

Moreover, as Lamb and Lane (2016) argue, good character itself can have powerful consequences, especially for persuasion. In the *Rhetoric*, Aristotle identifies the character of a communicator (*ethos*) as an effective means of persuasion, particularly when other means of persuasion—such as rational argument (*logos*) or emotional appeals (*pathos*)—are unavailable, ineffective, or inappropriate (Allen, 2004, pp. 141–144; Aristotle, 2006, 1.2.3-7). This insight is especially relevant for climate change communicators. Given the technical expertise and uncertainty involved in climate science, some audiences may not be able to judge how to best respond based on appeals to scientific fact alone. In such cases, the virtues of the communicator can provide a useful basis for judging whom to trust, particularly when the mass media emphasize or encourage conflicts between putative experts (Lamb & Lane, 2016, pp. 243–244). In these cases, research shows that audiences may no longer hold a default attitude of trust toward an expert they would otherwise deem "competent" (Fiske & Dupree, 2014, pp. 13593–13594). In the face of potential distrust, communicating one's character—for example, by treating audiences and opponents justly and respectfully, showing courage and humility, or demonstrating a willingness to make sacrifices to promote the common good—can show audiences that one's motives and intentions can be trusted (Lamb & Lane, 2016, pp. 248–249). It may also

help climate communicators rise above the ideological fray and communicate in ways that persuade the public to pursue responsible action (Lamb & Lane, 2016, pp. 249–250).

This emphasis on the consequences of communicating character, however, does not necessarily mean that communicators should become "virtue consequentialists." While virtue ethics and indirect consequentialism are both teleological approaches that recognize the importance of consequences and identify "happiness" as the ultimate telos, this structural similarity should not obscure significant differences. Most indirect consequentialists, for example, assume that exercising the virtues is only an *instrumental* means of achieving the best consequences for all, whereas virtue ethicists consider the exercise of virtue not only as instrumental but also as *intrinsic* and partly *constitutive* of flourishing (Oakley, 1996, pp. 139–140, 147–148).[26] Acting virtuously is not only a means of achieving some separate end but also constitutes part of the end itself. Virtue matters for its own sake, not simply for its good consequences.

This distinction points to a fundamental divergence between virtue ethics and standard forms of consequentialism: virtue ethics incorporates a more expansive set of considerations for evaluating, directing, and justifying an action, including "agent-relative" considerations (Oakley, 1996, pp. 139–144). Indeed, many strands of virtue ethics are often described as "agent-centered" since moral evaluation is focused not only on particular acts in discrete circumstances but on the whole of a person's life and the quality of their character over a longer period of time (Crisp & Slote, 1997, p. 3; Hursthouse, 1999, p. 29; Loudon, 1997, p. 204; Russell, 2013, pp. 1–2; Swanton, 2013, pp. 325–328). Thus, while virtue ethics acknowledges consequences as one of the relevant "circumstances" of an action, it also highlights the importance of an agent's *emotions*, *intentions*, and *dispositions*, the *roles* and *relationships* in which an agent's action, emotions, and intentions are situated, and the *norms* and *practices* that govern these roles and relationships. Virtue ethics thus incorporates a holistic conception of moral considerations relevant to both action and agency.

If such comprehensiveness is among virtue ethics's attractions, it is also seen as a weakness by some critics. Because virtue ethics offers no clear formula or algorithm for moral action, some critics argue that it fails to provide the concrete guidance expected from ethical theories (Louden, 1997, pp. 205–206; for discussion, see Hursthouse, 1999, pp. 35–42, 2013, pp. 11–13). This objection is common among both consequentialists who prefer a simpler cost-benefit analysis and deontologists who emphasize the action-guiding role of universalizable rules, principles, and norms. This concern may have special relevance for climate change communicators since recent work on the ethics of communicating scientific uncertainty has focused on identifying the most relevant action-guiding principles (Keohane et al., 2014).

Virtue ethics, however, can respond to these concerns in several ways. First, it can make room for relevant action-guiding principles: some demands of virtue can be translated or captured in the form of rules or maxims (Hursthouse, 1999, pp. 36–39). It is possible, for example, to formulate a principle or rule that corresponds not with a particular action

("tell the truth" or "do not lie") but with a particular virtue or vice ("be honest," "do not be dishonest"). Rosalind Hursthouse describes these as "virtue rules," or "v-rules," principles that identify virtuous action and character in the forms of prescriptions and prohibitions (1999, pp. 36–39). On such an account, some of the virtues and vices most relevant to climate communication might be translatable into v-rules, such as "be honest," "be transparent," or "do not be manipulative, dishonest, or deceptive."

A second and related way virtue ethics can incorporate principles reflects their developmental function: principles and rules can help individuals identify and develop specific virtues of character. Parents often give children rules or commands to teach them how to behave ("do not take what is not yours," "share with your friend") (Hursthouse, 1999, p. 39). What makes a child's action right or wrong is not that they followed or violated the rule, but that they treated others virtuously or viciously. The rules simply provide identifiable guidance to distinguish virtuous action from vicious action and direct adherents toward what is virtuous. Eventually, it is hoped that children (and adults) will come to act virtuously out of a settled and reliable disposition of character so they do not have to even think of the rule or principle when deciding how to act. They will just act virtuously, as if by "second nature" (Aquinas, 1948, I–II.58.1). But until individuals habituate this kind of virtue, rules and principles can be useful guides. This developmental function highlights an important role for rules and principles in climate change communication: until communicators fully acquire the virtues and skills needed for ethical and effective communication, principles and rules such as those identified by Keohane et al. (2014) can guide communicators on how to act while providing audiences with standards to hold them accountable.

Critics may still worry these replies do not resolve their fundamental objection: rules such as "be honest" or "be just" are so indeterminate that they fail to supply concrete guidance. Yet virtue ethics can rely on appeals not only to rules and principles but also to what a virtuous person would do in a similar situation (Aristotle, 1999, 2.6).[27] Asking how a courageous person would act, or how an honest person would communicate, can help communicators discern how they should think, feel, and act in comparable contexts. Of course, to discern the relevant contexts and make practical judgments about the most appropriate action or relevant exemplar will require communicators to exercise their capacities of perception and practical wisdom, but on that front, virtue ethics is no worse than consequentialist or deontological theories that require the same capacities to discern which principles are most relevant and how they are to be applied according to abstract criteria of rightness (Hursthouse, 1999, pp. 26–28, 35). Even if communicators know what a universalizable principle or criterion requires in the abstract, they still have to know when, where, and how to apply it in particular circumstances (Hursthouse, 1999, p. 40). Thus, communicators must rely on some capacity of practical reason to determine its proper application, and virtue ethicists argue that this capacity—practical wisdom—must be cultivated and refined over time, in light of previous experiences, the advice and example of virtuous exemplars, and relationships of mutual accountability. In this sense, virtue ethics does provide guidance on how to discern the virtuous action and develop the

relevant virtues (Hursthouse, 1999, pp. 35–42), and its emphasis on what a virtuous person would do might even be a more useful guide than abstract principles. Because it is based on ordinary moral notions and lived experiences, including experiences of knowing virtuous exemplars or communicators worthy of emulation, an appeal to what a virtuous person would do may be more accessible, intuitive, and thus action-guiding than appeals to abstract principles. Sometimes, considering what a wise mentor, friend, or colleague would do in a particular situation can supply more concrete guidance than reflecting on universal principles.

Furthermore, a blueprint for every possible action or circumstance may be too much to expect of any ethical theory (Annas, 2011, pp. 50–51; Hursthouse, 1999, pp. 40–42, 2013, pp. 11–13; Jamieson, 2007; McDowell, 1997). Communicators cannot outsource our moral judgment to a set of abstract rules or principles; otherwise, they could learn ethics as they do algebra or geometry. But moral decision-making is not as simple as reading a textbook or applying a mathematical formula. Virtue ethics acknowledges this difficulty and supplies a more specific vocabulary of virtue and vice to help communicators judge how actions can go morally better or worse (Annas, 2011, pp. 41–51). Moreover, even if communicators cannot agree on what is virtuous in every case, they can often agree on what is vicious: “Much invaluable action guidance comes from avoiding courses of action that are irresponsible, feckless, lazy, inconsiderate, uncooperative, harsh, intolerant, indiscreet, incautious, unenterprising, pusillanimous, feeble, hypocritical, self-indulgent, materialistic, grasping, short-sighted, … and on and on” (Hursthouse, 1999, p. 42). This insight highlights a valuable resource from virtue ethics: even if communicators and audiences cannot always agree on what is virtuous in a situation, a thick vocabulary of virtue and vice can warn them against courses of action that are, for example, manipulative, deceptive, dismissive, cowardly, inconsiderate, presumptuous, or unwise.

Moreover, if communicators must not only know what is virtuous or vicious but reliably do it, they also need virtues of character—courage, temperance, and justice—to supply the motivation to act virtuously when difficulties tempt them to act otherwise. An account that focuses only on rules and principles, or on a purely cognitive capacity of practical reason, cannot adequately account for how ethical action involves both reason and will, intellect and affect. A virtue account, with its emphasis on the interconnection of the virtues, can. This is one reason why contemporary defenders of deontological ethics have begun to emphasize a role for virtue, as Kant himself did in his oft-neglected “Doctrine of Virtue” (1996b, 6:373–474; see also Cureton & Hill, 2015). Even the most ardent deontologists need some “ethics of virtue,” if not a full-fledged “virtue ethics,” to understand, apply, and follow ethical principles (Adams, 2006, pp. 4–7; Hursthouse, 2013).

Ultimately, virtue ethics is relevant for climate communicators because it can accommodate the most intuitive aspects of consequentialism and deontology while supplying more detailed guidance on what the necessary virtues are and how they are cultivated. While virtue ethics acknowledges the importance of consequences, rules, and principles, it does not reduce ethics to their promotion or adherence. It also recognizes the developmental roles of participating in social practices, emulating virtuous

exemplars, learning from personal experience, and developing communities of trust and accountability that encourage moral excellence across various domains. This fundamentally developmental approach thus supplies a more comprehensive account of how communicators can be—and become—ethical (Annas, 2011, pp. 1–40; Russell, 2015; Snow, 2015). Because the ethics of climate change communication is a relatively new field without a tradition of reflection on these issues, this more holistic approach may be particularly useful in discerning how to teach and train climate change communicators to attend to both ethics and effectiveness.

Conclusion

The purpose of this article has been to consider how three major philosophical approaches illuminate different approaches to the ethics of climate change communication and imply different kinds of communicators. Attending carefully to the underlying assumptions that motivate and define each approach can help communicators determine how to perceive morally salient features of a situation, discern which moral considerations are most relevant, and deliberate and act in light of those moral considerations, especially when they seem to conflict. In this way, knowing whether communicators ought to maximize good consequences, act according to particular principles, or exercise specific virtues can help communicators decide how to act in particular situations. It can also guide their long-term moral and professional development, enabling them to develop the capacities and virtues needed to become ethical communicators. This developmental function highlights the relevance of virtue ethics as a holistic moral framework that focuses not only on how communicators ought to act in discrete situations but on the virtues they need to develop to think, feel, and act wisely across various contexts.

While virtue ethics may be the most relevant and holistic approach for climate change communicators, all three theories highlight important moral considerations that must be included in any comprehensive ethical framework. This is one reason why philosophers from all three traditions have recently sought to integrate aspects of each into their own. Consequentialists have incorporated rules, principles, and virtues into their decision procedures (Bradley, 2005; Crisp, 1992; Driver, 2001; Hooker, 2015; Hurka, 2000; Jamieson, 2007; Pettit, 1989, 1997; Railton, 2003), while deontologists have highlighted the importance of consequences (Rawls, 1999, p. 26) and affirmed the need for virtues to apply moral principles (Baron, 1997). Some virtue ethicists have explored what they “can learn from utilitarianism” (Russell, 2014), while others have recognized the role of rules, maxims, and norms in the education and exercise of character (Hursthouse, 1999). Climate change communicators have much to learn from all three approaches.[28]

Moreover, even if communicators ultimately disagree on the proper criterion of rightness and standards of moral justification, they may still be able to reach what Cass Sunstein (1998) describes as “incompletely theorized agreement” about more proximate virtues, principles, and relevant to climate change communication. Keohane et al., for example, apply Sunstein’s idea of “incompletely theorized agreement” to encourage agreement about the ethical responsibilities that accompany the role of a scientist when communicating uncertainty (2014, p. 349). The same approach might be extended to the more general role of a climate communicator: even those with different ethical theories may be able to agree on the virtues, principles, and responsibilities that properly attach to that role, regardless of the comprehensive ethical framework used to justify them.

Of course, given the distinctive challenges of climate change and the current state of the field, more work is needed to understand, analyze, and develop the ethics of climate change communication in both theory and practice. Because of their pioneering research, psychologists and social scientists have already shown how climate change communication can be effective. This article aims to prompt further research into how it can also be ethical.

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Notes:

(1.) For excellent overviews of the field, see Moser (2010); and Moser and Dilling (2007a, 2011).

(2.) The framing and substance of this article is informed by Lamb and Lane (2016). I am grateful to Melissa Lane for informing my views on these matters.

(3.) For the most influential essays on climate ethics, see Gardiner et al. (2010). For helpful overviews, see Brennan and Lo (2015); Gardiner (2006, 2010); and Jamieson (2014, pp. 144–177).

(4.) Moser identifies three purposes of climate change communication: (1) "*to inform and educate individuals about climate change*, including the science, causes, potential impacts, and possible solutions"; (2) "*to achieve some type and level of social engagement and action*"; and (3) "*to bring about changes in social norms and cultural values* that act more broadly" (2010, p. 38, emphasis original). The first seems compatible with the "analytical" role while the second two reflect the "motivational" role.

(5.) A full analysis of the complexities that attend epistemic inequalities and the correlative obligations of communicators and audiences is beyond the scope of this article. For various approaches, see, e.g., Anderson (2011); Coady and Corry (2013, pp. 22–34); Douglas (2009, pp. 133–174); Forsyth (2011); Lane (2014); and Langford and Lane (n.d.).

(6.) Following Baron, I prefer “approaches” to “theories” since “approaches” “leaves room for their not all being theories, or theories of the same thing” (1997, p. 4). This is particularly important given that virtue ethics differs from consequentialism and deontology in how it understands criteria of rightness.

(7.) For this reason, I deliberately cite sources that can supply useful introductions to guide those interested in learning more about each general approach to ethics.

(8.) For helpful overviews of consequentialism that inform the following account, see Driver (2007, pp. 61–79, 2014); Kymlicka (2002); Pettit (1997); Sandel (2009, pp. 31–57); Sinnott-Armstrong (2015); and Williams (1973).

(9.) For a history of classical utilitarianism, see Driver (2007, pp. 40–60, 2014).

(10.) For overviews, see Crisp (2016); Kagan (1998, pp. 29–48); Kymlicka (2002, pp. 13–20); and Sinnott-Armstrong (2015).

(11.) On why this slogan can be “misleading,” see Kymlicka (2002, p. 13, n50); and Sinnott-Armstrong (2015).

(12.) For a discussion of consequentialism’s attractions and limitations, see Kymlicka (2002).

(13.) On the influence and limits of existing economic assumptions and models in debates about climate change, see Dietz (2011); Farmer et al. (2015); Jamieson (1992, 2014, pp. 105–143); Spash (2002); and Stern (2016).

(14.) For discussion, see Kagan (1998, pp. 66–69); and Sinnott-Armstrong (2015).

(15.) For versions of this critique, see Alexander (1985, pp. 319–320, 325); Alexander and Moore (2015); Kymlicka (2002, pp. 30–32); Lyons (1965); Oakley (1996, p. 131); Smart (1973, pp. 9–12); and Williams (1973, pp. 81, 118–135). For one response to these objections, see Hooker (2015).

(16.) For helpful overviews of deontological ethics that inform the following account, see Alexander and Moore (2015); Baron (1997); Driver (2007, pp. 80–101); and Sandel (2009, pp. 103–139).

(17.) One ethical framework that has emerged from the broadly deontological tradition is “contractualism,” which justifies right action according to general principles that every reasonable person could reasonably accept (Rawls, 1999), or that no reasonable person could reasonably reject (Scanlon, 1998). An analysis and application of contractualism is beyond the scope of this inquiry.

(18.) Since most contemporary editions of Kant’s works, including Gregor’s translations (Kant, 1996a, 1996b), include marginal references to the standard German edition [*Kant’s Gesammelte Schriften* (Royal Prussian Academy of Sciences, Ed.) (Berlin: George Reimer,

1900–), I cite these marginal references rather than the page numbers from Gregor's edition.

(19.) For a helpful overview of ways to interpret contradictions in conception and willing, see Driver (2007, pp. 87–89).

(20.) For the distinction between "agent-centered" and "patient-centered" deontology, see Alexander and Moore (2015).

(21.) This universal duty to treat human beings as autonomous agents and never as "mere means," however, does not require that we cannot treat human beings as means at all. Kant's caveat is important: the principle prohibits using other human persons *merely* as means; it does not prohibit relying on others' assistance at all.

(22.) Douglas even suggests that rejecting the "value-free ideal" is compatible with maintaining the "objectivity," or trustworthiness, of science. She identifies seven types of objectivity that should be preserved (2009, pp. 115–132).

(23.) Fischhoff may be amenable to this suggestion. To improve communication and decision-making, he recognizes the need for scholars in climate science, decision science, and social science (Fischoff, 2007, p. 7206), but he does not seem to recognize a diversity of roles *within* these fields. Such a division of labor, however, may fit with his account.

(24.) For overviews of virtue ethics that inform the following account, see Annas (2011); Hursthouse (1999, 2013); Oakley (1996); and Zagzebski (1996). For a collection of influential essays, see Crisp and Slote (1997).

(25.) This article focuses solely on Aquinas's account of the *acquired moral virtues* rather than on the *theological virtues* or *infused moral virtues*.

(26.) One notable exception is Thomas Hurka's virtue-consequentialism, which involves a "recursive" account of good and evil that enables virtue to be defined as an intrinsic good (see Hurka, 2000, esp. pp. 3–57).

(27.) Within virtue ethics, there is a dispute between scholars who suggest that discerning what a virtuous person would do *defines*, *justifies*, or *constitutes* right action (e.g., Hursthouse, 1999, pp. 28–31) and those who suggest that it serves instrumentally as a *useful guide* to right action (e.g., Swanton, 2013, pp. 330–331). Assessing the conceptual differences between these approaches is beyond the scope of this article.

(28.) That communicators can learn from all three approaches fits with Jamieson's suggestion that "the great traditions in moral philosophy should be viewed as more like research programs than as finished theories" (2007, p. 163).

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