

1 Presuppositions of Communication

Accessibility, Intelligibility and Assessability

Communication includes a wide and distinctive range of activities that link originators to recipients. Like other complex activities, it must meet both technical standards and ethical and epistemic norms. Unsurprisingly discussion of many of the norms and standards that bear on communication is an age-old theme. And unsurprisingly these norms and standards may need review and reconsideration if we are to reach a convincing view of the ethics of communication that uses new technologies.

Many of the technical standards for communicating successfully are highly specific. They depend on the aims of those who seek to communicate, the symbolic systems and technologies they use, and the audiences they seek to reach. However, all communication must meet three generic technical requirements if it is to succeed. What originators seek to communicate must be *accessible* to recipient(s), must be *intelligible* to them, and must be *assessable* by them in ways that support understanding and interpretation, and enable forms of check and challenge. These three very broad technical requirements bear on all communication. Each is needed for communication to succeed, whether it is ethically acceptable or unacceptable, whether it is epistemically robust or flaky.

Accessibility can be secured in many ways. Originators and recipients are sometimes immediately present to one another, with direct access to and awareness of one another's communication. In other cases, they may be physically distant from one another, but linked in ways that enable communication. Sometimes these links are provided by chains of individual intermediaries, each with access to at least one other. In other cases, originator and recipient may be part of a network of interconnected communicators, or of a public sphere in which communication can travel by many routes and reach varied audiences. And in many cases, accessibility is supported by technologies, including writing and printing, broadcasting and film, as well as digital technologies.

Intelligibility requires originators and recipients to share (at least) elements of a common language or other symbolic system, which may use speech, or written symbols, images or music. Shared natural languages are typically supported by complex cultural practices and standards, often reinforced by mutually intelligible facial expressions and gestures, by illustrations, sounds and symbols, by conventions and courtesies. Verbal communication can be augmented – and sometimes replaced – by welcoming smiles or menacing fists, by traffic signs or familiar trademarks, by displays of sacred emblems or noisy fanfares, and by countless other forms of non-verbal communication.

Assessability is needed if recipients are to attend to, interpret or challenge others' assertions and proposals. Some aspects of assessability provide humdrum ways of checking what was communicated. Others are more ambitious and

searching. They include processes and standards for interpreting or reinterpreting others' speech acts, thereby shaping or reshaping how their communication is understood, the responses it is likely to receive, and the cultural and ethical significance it will be given. Recipients are not merely passive when they attend to and grasp what others seek to communicate: they must pay attention, assimilate, assess, interpret and in some cases empathise with one another's communication. This is true of everyday conversation, of communication that uses what are occasionally (rather disparagingly) called 'legacy media' – print, radio and television – and of communication that uses digital technologies. Communication is always at least a two-way activity, and recipients too are agents.

Widening Accessibility: Spreading the Word

The accessibility of communication can be expanded in many ways. Perhaps the oldest way of making communication more widely accessible is by languages becoming more widely intelligible or translatable. Expanded intelligibility made some natural languages – Greek in the ancient Mediterranean, English in the modern world – more widely accessible as they became intelligible to more people, who could then understand and use them. In such cases, expanded accessibility piggy-backs on expanded intelligibility. However, in a world in which the number of living languages has long been falling, while human populations have been increasing, expanding the accessibility of others' communication has not generally relied on widening its

intelligibility. This slow, organic way of widening accessibility has its limits, and most ways of increasing accessibility neither require nor presuppose changes in the intelligibility of specific ways of communicating.

The most obvious and the oldest way of extending accessibility without extending intelligibility is by relying on others to spread the word. Accessibility can be secured and extended by chains of human intermediaries who pass messages from speaker to speaker, from hand to hand, from rider to rider. Supporting accessibility by chains of human intermediaries has a long but chequered history. Chains are only as strong as their weakest links, and the accessibility they provide can be limited and vulnerable. In his book on testimony, the Australian philosopher Tony Coady illustrated this point with a (no doubt apocryphal) story about a wartime message that travels from the front line to headquarters by whispers passed from soldier to soldier. The original message was urgent: 'Send reinforcements, we are going to advance!'; but what arrived was less so – 'Send three-and-fourpence, we are going to a dance!'¹ As chains of intermediaries lengthen, opportunities for messages to be corrupted or lost multiply.

Other ways of extending accessibility are both more robust and more convenient than passing messages serially via successive individual communicators. The history of communication technologies is in part one of expanding accessibility by using technological rather than human intermediaries in order to reach more, or more distant, or different recipients. It is a long and complex history and includes the invention and spread of writing, of printing, of

telegraphy and telephony, of broadcasting, film and television, as well as the digital revolution of the late twentieth century. Each new technology extended and reshaped accessibility in distinctive ways. Changes in accessibility in turn reshaped the ways in which recipients could understand and assess one another's communication.

Digital technologies have extended accessibility in dramatic ways, producing both changes that are welcome and beneficial, and changes that can be used to harm and wrong others. The ramifying connectivity they provide can make it harder for recipients and originators to identify one another. Where originators can be hidden from recipients, let alone when provenance is deliberately hidden or falsified, even content that is both accessible and readily intelligible may be unassessable, or less assessable, for many recipients. Conversely, when recipients can be hidden from originators, they cannot identify their audiences and may be unsure whether to communicate or what they can securely share. It is hardly surprising that conspiracy theories are flourishing in the era of digital communication technologies: no earlier communication technology has made available such rich opportunities to disrupt assessability by redirecting or controlling, targeting or suppressing, both what is communicated, and information about its originators and recipients.²

Digital technologies are, of course, not the first technical innovations to alter communication, nor the first to expand connectivity. Nor are they the first to disrupt established ways of communicating. New technologies have repeatedly changed ways in which originators reach recipients, the range of recipients they can reach, the ways in

which communication can succeed or fail, and the extent to which recipients can follow and assess others' communication. Past accounts of problems produced by new communication technologies, and of ways in which those problems were addressed, are therefore likely to be instructive. I shall comment briefly on some of the problems that have arisen when established ways of communicating were disrupted by past technological changes, and on some ways in which disruptions were addressed.³ Past difficulties and their resolution may shed light on some of the ethical issues that arise in using digital technologies to communicate.

Some Limits of Digital Communication

This book is specifically about the ethics of digital *communication*, so will not address the many ethical issues that arise when digital technologies are used for other purposes. So, I shall not try to cover the full range of issues sometimes labelled 'digital ethics' or 'data ethics', or to address all the ethical and epistemic issues that digital technologies have raised.

The phrases 'digital ethics' and 'data ethics' suggest, I think misleadingly, that all activities that use digital technologies raise a common set of ethical issues. Yet it is common for a technology or tool to be used for various purposes or activities that raise distinct ranges of ethical issues. For example, tables are an immensely useful technical invention: they provide flat horizontal surfaces at a convenient height for human purposes, such as eating meals and organising paperwork. But it does not follow that 'table

ethics' would form a coherent or unitary inquiry. We can discuss table manners and hospitality, or office organisation and processes, and both will no doubt raise ethical (and other) issues. But it makes little sense to see all ethical questions that bear on activities that typically use tables as parts of some unitary body of thought that should be known as 'table ethics'. Ethical standards are relevant to types of *action*, and different activities that use the same tools or technologies may raise quite different issues.

I shall focus specifically on ethical issues that arise from using digital technologies *to communicate with others*, and will not cover those raised by other uses of those technologies. I shall not discuss ethical issues that can arise in designing software, or developing its applications or choosing algorithms for particular purposes, or those raised by Artificial Intelligence, machine learning, the Internet of things, robots, 'autonomous' vehicles or 'autonomous' weapons.

Nor will I cover the use of technical measures to pre-empt normative – legal, ethical, and epistemic – questions. Roger Brownsword has pointed out that 'the direction of regulatory travel is towards technological management', and argues that technical measures can block the very possibility of 'non-compliance' and preclude ethical and other normative issues.⁴ When communication with human audiences is subjected to technological management, action that might previously have been seen as breaching normative requirements is simply prevented by technical means, and questions about the *ethics* of communication are displaced. Normative questions may, of course, arise about decisions to rely on technical measures.

Nor will I discuss the use of digital technologies for specific activities, such as online gambling and gaming, online shopping and marketing, online banking and payment systems,⁵ or online security services and record keeping. Each of these and countless other applications of digital technologies raises distinctive ethical issues, and many of them also raise questions about the ethics of communication. Digital technologies can be used to control or monitor industrial and administrative processes; to obtain, record, organise, classify, preserve, analyse, link, disseminate, and suppress data; to measure, monitor and predict aspects of the natural and human worlds and to distribute and market a huge variety of information and services. Each use of digital technologies is likely to raise ethical questions. However, it is not feasible to cover all the ethical issues raised by every application of digital technologies. My focus will be squarely on those that arise in using digital technologies for communication that links human originators to human recipients, and requires not only accessibility and intelligibility, but assessability.

In some cases, the results of activities and systems that use digital technologies for purposes other than communication are then communicated to various audiences, or are made public; in others they are not, or are communicated only if results exceed or fall short on some predetermined critical indicator. Given the gigantic volume of data processed by digital technologies for countless different purposes, this is neither surprising nor avoidable. The ethical issues raised by using digital technologies to communicate with human recipients are numerous, complex and important, and my discussion will be far from exhaustive.

The Wider Context

Regardless of the technologies used, all communication raises ethical questions. All methods of communicating can be (mis)used to deceive or manipulate, to intimidate or defame, and for many other questionable purposes. What matters for the ethics of communication, whichever technologies are used, is whether originators and recipients respect relevant epistemic and ethical norms and standards and can tell whether those with whom they (seek to) communicate do so. Face-to-face speech and technologically mediated speech both lend themselves to ethically and epistemically acceptable and to ethically and epistemically unacceptable types of action. Both can be, and both often are, used not only to inform and communicate honestly and accurately, but to deceive and exaggerate, to distribute propaganda and to defame, to inflate and damage reputations and to exercise covert influence over others' beliefs and action – and for countless other purposes. Ethically and epistemically questionable communication long predates the introduction and spread of digital technologies.

However, new technologies make a difference. They can reshape and extend communication, both for good and for ill. Digital technologies can, for example, be used to influence others in ways that earlier technologies did not support. This is sometimes done by acceptable, even admirable, methods, such as making more (and more robust) evidence and information more widely available. But it can also be done by ethically dubious methods, that rely variously on covert surveillance, blackmail, data theft and

identity theft, or that circulate false or dubious claims about selected originators and topics, or target selected recipients with misleading or menacing content. The old familiar speech wrongs, including lying, misleading, distorting and spreading propaganda, not merely remain available and tempting, but have in some ways been reinvigorated and diversified by the availability of digital technologies. In some cases, speech wrongs are reinvigorated by ‘targeting’ recipients with content that is chosen to persuade, to mislead or to manipulate, while ensuring that originators remain unidentifiable or unknown.

The fact that digital technologies are used for so many purposes other than communication casts some light on the rather awkward vocabularies used to discuss them. These technologies are often referred to as *communication technologies*, ignoring the many non-communicative uses to which they are also constantly put. Sometimes they are rather more accurately referred to as *information and communication technologies (ICT)*, so acknowledging that not all ways of using or processing information are used to communicate. Yet this terminology too may not be apt. As James Williams has pointed out:

we persist in describing these systems as ‘information’ or ‘communication’ technologies, despite the fact that they are designed neither to inform us nor to help us communicate.⁶

This is true, but Williams then suggests that other uses of these technologies aim to produce an ‘infrastructure of industrialised persuasion . . . and to open a door directly

onto our attentional faculties'.⁷ This also seems to me correct, but still too narrow. Digital technologies can be used to communicate, and for many further purposes that are neither ways of communicating, nor ways of informing, nor even ways of persuading (which usually involves communication, if sometimes ethically questionable or defective communication).

The broadest, although not the most popular, vocabulary for referring to digital technologies was proposed long ago by Norbert Wiener. He wrote in the preface to the second edition of his classical work *Cybernetics* that when he and his colleagues became aware of

the essential unity of the set of problems centring about communication, control, and statistical mechanics, whether in the machine, or in living tissue . . . we were hampered . . . by the absence of any common terminology and . . . decided to call the entire field of control and communication theory whether in the machine or in the animal by the name *Cybernetics* . . .⁸

The element *cyber* is now often used in compound terms, such as *cyber intelligence* or *cyber warfare*, *cybercrime* or *cyber bullying*. Here the emphasis is typically on using digital technologies to control or influence, sometimes without communicating with those affected, and sometimes by communication that ignores or indeed flouts various ethical and epistemic standards.

Uses of digital technologies that do not mainly aim to communicate are of huge variety and importance, and raise many questions. However, here I intend to concentrate

on uses whose primary aim is to communicate with human recipients, and on the ethical and epistemic standards that matter for that communication. I shall comment both on uses of digital technologies to communicate with individuals, and on their use for public communication that bears on cultural and social life, on scientific and other inquiry, and on public and political life. These communicative uses of digital technologies raise a wide, diverse and significant nexus of ethical and epistemic questions.