

# Digital Keywords |

*A Vocabulary of Information  
Society and Culture*

Edited by  
**Benjamin Peters**

Princeton University Press  
Princeton and Oxford

# Contents

*Acknowledgments xi*

*Introduction*

*Benjamin Peters xiii*

- 1 Activism**  
*Guobin Yang 1*
- 2 Algorithm**  
*Tarleton Gillespie 18*
- 3 Analog**  
*Jonathan Sterne 31*
- 4 Archive**  
*Katherine D. Harris 45*
- 5 Cloud**  
*John Durham Peters 54*
- 6 Community**  
*Rosemary Avance 63*
- 7 Culture**  
*Ted Striphas 70*
- 8 Democracy**  
*Rasmus Kleis Nielsen 81*
- 9 Digital**  
*Benjamin Peters 93*
- 10 Event**  
*Julia Sonnevend 109*
- 11 Flow**  
*Sandra Braman 118*

- 12 Forum**  
*Hope Forsyth* 132
  - 13 Gaming**  
*Saugata Bhaduri* 140
  - 14 Geek**  
*Christina Dunbar-Hester* 149
  - 15 Hacker**  
*Gabriella Coleman* 158
  - 16 Information**  
*Bernard Geoghegan* 173
  - 17 Internet**  
*Thomas Streeter* 184
  - 18 Meme**  
*Limor Shifman* 197
  - 19 Memory**  
*Steven Schrag* 206
  - 20 Mirror**  
*Adam Fish* 217
  - 21 Participation**  
*Christopher Kelty* 227
  - 22 Personalization**  
*Stephanie Ricker Schulte* 242
  - 23 Prototype**  
*Fred Turner* 256
  - 24 Sharing**  
*Nicholas A. John* 269
  - 25 Surrogate**  
*Jeffrey Drouin* 278
- Appendix: Over Two Hundred Digital Keywords* 287  
*About the Contributors* 291  
*Index* 297

# 7

## Culture

Ted Striphas

Raymond Williams's *Keywords* isn't just a compendium of important terms in the English language. It's better imagined as a linguistic jigsaw puzzle, albeit one whose pieces are moving in relationship to one another. New terms get introduced, older ones drop out, and still others change shape as semantic edges grind together, altering the appearance of the whole. How else can one explain the unique structure of the work—each entry populated by a series of companion terms that, taken together, constitute a network of internal relations far more complex than anything suggested by the book's alphabetized table of contents? Or its iterative nature—beginning with the introduction to Williams's *Culture and Society* and its focus on the words *industry*, *democracy*, *class*, *art*, and *culture*, then mushrooming into the 110-entry first edition of *Keywords* published in 1976, and culminating in the revised edition of 1983, which added a further 21 terms (Williams 1958, xiii–xx; Williams 1976; Williams 1983a)? Little wonder Williams described *Keywords* as “necessarily unfinished and incomplete,” having just performed a major overhaul (1983a, 27).

It is within this context that one ought to begin making sense of any keyword, including the one under consideration here, *culture*. First observation: in *Keywords* Williams says nothing explicit about *culture*'s relationship to digital technology. This isn't surprising given the historical ambit of the work, the endpoint for which is roughly the end of the third quarter of the twentieth century, when analog or at least predigital techniques still ruled the day (see [analog](#)). Second observation: the entry for *culture* is marked by its simultaneous distance from, and nagging referentiality to, the technological ethos of modern production. Williams states that *culture* “was used to attack what was seen as the ‘MECHANICAL’ character of the new

civilization . . . emerging [in the nineteenth century]: both for its abstract rationalism and for the ‘inhumanity’ of current industrial development” (1983a, 89) Or, as Gilbert Simondon puts it: “while [culture] grants recognition to certain objects, for example to things aesthetic, and gives them their due place in the world of meanings, it banishes other objects, particularly things technical, into the unstructured world of things that have no meaning but do have a use, a utilitarian function” (1980, 2; cf. Horkheimer and Adorno 1997). Third observation: Williams saw fit to add *technology* to the 1983 edition of *Keywords*, an acknowledgment, perhaps, of the term’s gathering import with respect to a vocabulary of culture and society. Yet, at three-quarters of a printed page, the write-up is barely a skeleton. (*Culture* gets six pages; *class*, the longest entry, nine.)

And so the trail linking *culture* to digital technology runs cold—unless one approaches the topic of keywords not in terms of a lone text but as an endeavor transecting multiple volumes in Williams’s oeuvre. Moving outward from the ur-text, there emerges a Williams more attentive not only to technology (1974; 1983b), but also to the growing prevalence of the digital. To wit: in the penultimate section of his book *Culture*, published in 1981, he discusses the decline of industrial production in the West and, with it, the growth of “information processes.”<sup>1</sup> He doesn’t mention computational technologies by name, although he does refer to “data collection and processing” as activities integral to what Daniel Bell, one of Williams’s interlocutors (1983a, 27), had termed “post-industrial society” (Bell 1973; see also Williams 1983b, 83–102). “Thus,” writes Williams, “a major part of the whole modern labour process must be defined in terms which are not easily theoretically separable from the ‘traditional’ cultural activities” (1981, 231–32).

By 1981, then, Williams seems to have grasped how *culture* and *technology* were becoming less opposed than they once were, practically and theoretically. This was thanks in part to culture’s budding relationship to digital information processing, a relationship mediated initially by large-scale institutional mainframes and, by the early- to mid-1980s, desktop personal computers. Fast-forward to the early 2000s, when these articulations have become so well established as to give rise to a host of lexical offshoots. The entry for *culture* appearing in the Williams-inspired reboot *New Keywords*

mentions *cyberculture* and *technoculture* (Bennett 2005, 68); the volume also includes entries for *information*, *network*, and *technology* (Webster 2005a; Webster 2005b; Ross 2005). More recently Lev Manovich has employed the phrase *cultural software* “literally to refer to certain types of software that support actions we normally associate with ‘culture’” (2013, 20).

It seems fair to say that a rapprochement between *culture* and *technology* has been achieved. But how has *culture*’s growing proximity to technology, particularly digital computational tools, affected the senses and meanings, the values and practices, with which the word is associated? “Culture,” writes Simondon, “must come to terms with technical entities as part of its body of knowledge and values” (1980, 1). This is a matter of grammar, in the classical sense of apprehending words and then reconciling them both with and against the realities through which one moves.

Here it’s useful to revisit the three understandings of *culture* Williams advances in *The Long Revolution*, published in 1961, which form a basis for the entry appearing in *Keywords*. Strictly speaking, these aren’t so much definitions as “general categories” or rubrics under which Williams gathers a host of senses and meanings accessible at the time he was writing (1961, 57). They include the following:

- 1 the “ideal” definition, referring to the systems of valuation by means of which groups establish hierarchies, and subsequently judge the worth, of people, places, objects, institutions, and ideas;
- 2 the “documentary” definition, referring to the whole range of artifacts, both material and immaterial, produced by a group of people;
- 3 the “social” definition, referring to “a particular” or “whole way of life” (1961, 57; 1958, xviii), i.e., the patterns of thought, conduct, and expression, including the structures of signification, prevalent among members of a collective.

The entry for *culture* appearing in the *Oxford English Dictionary* traverses much the same ground as does *The Long Revolution*, suggesting that the array of senses and meanings Williams identified

in his early work remain dominant reference points fifty years on (“Culture, n.” 2014). But it’s also worth bearing in mind the “sacral attitude” of dictionaries (Williams 1983a, 20), or their tendency to consecrate preferred usages at the expense of residual forms (“archaisms”) and emergent ones (“vulgarizations”).

Indeed, the story of *culture* post-1950 is centrally about archaism, or the reactivation of latent senses and meanings, and about vulgarization, or the appearance of novel understandings that seem to corrupt tried-and-true definitions of the word.

*Culture* doesn’t exactly begin its career in the late eighteenth century, although it is around this time that the term leaves the semantic confines of husbandry and enters broader usage, gradually taking on the range of meanings encompassed by the three rubrics above (Williams 1983a, 87; see also Flusser 2013, 89–96). *Culture* then becomes a quintessentially modern term, carving out a conceptual space for human beings apart from nature on the one hand, and from technology on the other, subordinating both in the process (Latour 1993, 104).

The distinction from nature migrates into English primarily from German, establishing something like a mode of existence for human beings transcending the natural world. For example, in 1782 the influential German lexicographer Johann Christoph Adelung defined *culture* (*Kultur*) as “the transition from a more sensual and animal condition to the more closely knit interrelations of social life” (qtd. in Kroeber and Kluckhohn 1963, 37; see also McNeil 2005, 236; Marx 1964). His definition bespeaks the distance between *culture’s* modern form and its etymological taproot, the Latin *colere*. The latter denotes harvesting and cultivation, not in an instrumental sense but in a religious one, exemplified by the carryover into the English-language word *cult* (Flusser 2013, 90–91). *Colere* suggests the human species’s dependency on and subordination to the natural world; *culture* loosens the tie and inverts the relationship (or at least gives the appearance of doing so).

The distinction from technology arises about a century later, mainly in England, fueled by the country’s rapid industrialization and attendant concerns about the rising tide of proletarian democracy. The emergence of this sense is evident above all in Matthew Arnold’s *Culture and Anarchy*, published in 1869. Arnold contended

that *culture* was antithetical to industrialism, and more specifically to the machines out of which poured the run-of-the-mill, both literally and figuratively. “The idea of perfection”—his preferred view of *culture*—“is at variance with the mechanical and material civilization in esteem with us” (1993, 63; see also 78, 94). Thus Arnold championed the cause of public pedagogy, a pedagogy focusing on moral and spiritual development through exposure to impeccable art, literature, and other imaginative works whose instruments of production he refused to acknowledge. He had another aim too: to habilitate *culture*, which, owing to its connotation of pretentious learning, had hitherto played second fiddle to *civilization* in English-language usage.

So, in the nineteenth century, there emerges an overarching view of *culture* as “a court of human appeal” (Williams 1958, xviii), a view that aligns with the then-burgeoning phenomenological understanding of the lifeworld as an “autonomous realm” of human affairs (Kittler 2006, 42). This view is part and parcel of the birth of humanism, and of the humanities, the latter of which thematized *culture* and took it as its organizing motif (Williams 1983a, 150; Kittler 2006, 40–42). But *culture* doesn’t shed its older, agricultural meanings completely. It retains a semblance of them in the Arnoldian belief, inherited from Johann Gottfried Herder, that *culture* consists of a long, deliberate process of nurturance and growth—although now selves are cultivated rather than soil and seeds.

These are decisive developments. In the near term they helped secure authority for the humanities, positioning both its practitioners and the disciplines to which they belonged as the leading arbiters of “cultural data” (Kittler 2006, 41). But in the long term they also helped precipitate a crisis, or rather a whole complex of crises that persist into the present day. Michel Foucault was among the most prescient observers of the coming troubles when, in 1966’s *Les mots et les choses* (*The Order of Things*), he concluded:

Man is not the oldest nor the most constant problem that has been posed for human knowledge. . . . It is not around him and his secrets that knowledge prowled for so long in the darkness. In fact, among all the mutations that have affected the knowledge of things and their order . . . only one, that



which began a century and a half ago and is now perhaps drawing to a close, has made it possible for man to appear. . . . [M]an is an invention of recent date. And one perhaps nearing its end. (1970, 386–87)

Here, in his archaeology of the human sciences, Foucault glimpsed the beginning of the unraveling of modern humanism, a process that, by the closing decades of the twentieth century, would open *culture* to meanings, practices, and interpretive approaches that had largely been excluded for the better part of two centuries. Subsequent critics have suggested that “culture . . . has lost its purchase” as a result of these shifts (Readings 1996, 12). However, Lawrence Grossberg contends that *culture* remains a term of significance today, though “the ways in which it matters—and hence, its effects—have changed in ways that we have not yet begun to contextualize or theorize” (2006, 17).

Two puzzles, then: What has happened to humanism? And what is happening to *culture*, semantically, experientially, and theoretically? Donna J. Haraway and N. Katherine Hayles have gone further than most in addressing the former question. They identify the Second World War as a turning point when hermetic notions of “the human” began breaking down. For Haraway (1991) the shift is embodied in the figure of the cyborg and, for Hayles (1999), in that of the posthuman. While differing in important respects (Haraway 2006, 140), both figures trouble hard-and-fast distinctions between human beings, nature, and technology—the distinctions that helped secure the apparent autonomy of *culture* in the early nineteenth century. Moreover, Haraway and Hayles attribute the breakdown most immediately to the rise of cybernetics and information theory, many of whose key breakthroughs occurred within the context of the war (cf. Pickering 2010, 4). According to Haraway these fields provoked a “communications revolution,” as well as a broader “re-theorizing of natural objects as technological devices properly understood in terms of mechanisms of production, transfer, and storage of information” (1991, 58).

The latter term—*information*—was the hinge on which this process swung. It functioned as a kind of counteranthropological leveler, an abstraction under which could be gathered a diverse array of

expressive phenomena, both human and nonhuman (Schrödinger 1944, 70–71; Wiener 1954, 32; Bateson 2000, 272, 315–18; Peters 1988; Gleick 2011). The third quarter of the twentieth century saw a host of efforts to reconceptualize *culture* along these lines. Sociologist Talcott Parsons viewed it as an information-rich, cybernetic system (1970, 514–16), while his student, anthropologist Clifford Geertz, suggested that the operations of culture closely resembled those of computer software, given their shared concern for symbol processing (1973, 44). Parsons and Geertz were still operating at the level of analogy, however, viewing culture through a metaphoric of computation rather than positing an actual equivalence between them. Williams took it that next step in his claims about the entwining of cultural work and data processing. Tiziana Terranova has gone even further in suggesting that information now serves as a “milieu” or “environment within which contemporary culture unfolds” (2004, 8).

Here one might speak of the subsumption of *culture* under *information*, or rather its subsumption under the auspices of digital computational technologies. The term *subsumption* comes from Karl Marx, who uses it to identify two phases in the history of capitalist development. The first phase, or “formal” subsumption, refers to the capitalization of precapitalist relations, resulting in hybrid forms grafted on to the new mode of production. The second phase, or “real” subsumption, refers to the gradual emergence of properly capitalist productive relations, or relations that are capitalistic through and through (1976, 645–46, 1019–25). The history of *culture* in the second half of the twentieth century follows a similar trajectory, where formal analogies between culture and computation are now starting to realize themselves in a range of theories and practices that reconceptualize the former in terms of the latter. How else can one explain the emergence of mash-ups like “culturomics,” the “digital humanities,” and “humanities computing,” or the reimagining of cultural artifacts as a corpus of “big data”?

One of the more intriguing outgrowths of all this has been a recognition, still dawning, of the ways in which *culture* exceeds human discourse, perception, and sense making. The work of Félix Guattari is exemplary in its insistence that human expression is but one element of an “assemblage of enunciation” whose ranks

include “extra-linguistic, biological, technological,” and other “a-signifying” modes of communicative practice (1995, 24). What one sees here is an awareness of how specific categories of signs, unintelligible to or unintended for humans, can nonetheless have a profound effect on the form, content, and delivery of culture. QR and other types of machine-readable product codes are a case in point (Striphas 2009, 81–110), as are techniques of search engine optimization, which “tune” websites for maximum discoverability by machines. What one also sees, then, is a stretching of the boundaries of culture beyond the “webs of significance” with which, in some formulations, it was once thought to be equivalent (Geertz 1973, 4). Given the degree to which machine-based systems now communicate about and process (sort, classify, prioritize) culture, it seems difficult to imagine it strictly as a “court of human appeal.” One could reasonably see it as a court of machinic appeal as well (Hallinan and Striphas, in press).

All that is to say: sometime around 1950, the category *culture* starts to slide into the orbit of technology, having slipped, to a significant degree, the gravitational pull of modern humanism. With that an ostensibly antiquated sense of *culture*—the agrarian one referring to husbandry—is given a new lease on life. At first blush, the connections may not seem obvious. Computation seems to have little in common with “the tending of natural growth,” *culture*’s original meaning in the English language (Williams 1983a, 87), also the sense both Herder and Arnold borrowed and twisted. Yet the semantic connections are there: in the notion of tending, indicating skill or technique, a derivative of the ancient Greek τέχνη (*technē*), from which the word *technology* derives (Stiegler 1998, 93); and also in *coulter*, a “subsidiary” form of the word *culture*, sometimes spelled as such, designating an instrument for tilling the soil or, as Nicholas John notes in this volume, for dividing and sharing (Williams 1983a: 87; see [sharing](#)). Once again, *culture* is becoming less distinct from its tools, and vice versa. Its story post-1950 thus exemplifies how “archaic” or residual forms press and persist, producing latencies of meaning that can reemerge under proper conditions.

To reiterate, this is not to suggest that the modern view of *culture*, exemplified by Williams’s three definitional rubrics, is receding into the background. If anything the dominant view is

compelled to cohabit with the emergent forms, producing what, in traditional lexicography, is apt to be understood as vulgarizations of meaning. Consider once again Matthew Arnold's *Culture and Anarchy*. The book proceeds from the assumption that "our social machine is a little out of order," and that *culture* is the "principle of authority" that will "counteract the tendency to anarchy" (1993, 88, 89). Despite Arnold's misgivings about modern technology, his view comports in an odd way with the position of applied information theory. Today, and to an unparalleled degree, Google and its kin adjudicate what Arnold once described as "the best which has been thought and said" (190). They do so by parsing signal and noise billions of times each day, in an effort to attenuate information overload. Though their means and ends differ, both Arnold and Google are invested in determining which aspects of human expression are most worthy of rising above the din. Both, therefore, are in the business of finding order amid the apparent chaos. Just as Arnold wrote *Culture and Anarchy*, so Google and company may well be writing the companion volume, *Culture and Entropy*.

Like any account of *culture*, this one, focusing on its relationship to digital technology, is partial—"necessarily unfinished and incomplete." This isn't a function of the focus, however, as much as it is a testament to the dynamism and adaptability of "one of the two or three most complicated words in the English language" (Williams 1983a, 87). Indeed, over the last fifty or sixty years *culture* has taken on new inflections—or rather reinflected older senses and meanings—many of which embody its current association with digital computational tools. The overview presented here thus is intended not as a narrow account of *culture*, circumscribed by a particular subject matter, but as one that significantly reflects the predicament of *culture* since the end of the Second World War.

*See in this volume:* algorithm, analog, cloud, democracy, digital, information, personalization, sharing

*See in Williams:* art, bureaucracy, civilization, common, communication, community, culture, generation, humanity, ideology, industry, machine, masses, media, nature, science, society, technology, western

## Note

- 1 The US edition bears the title *The Sociology of Culture*.

## References

- Arnold, Matthew. 1993. *Culture and Anarchy and Other Writings*. Edited by Stefan Collini. Cambridge: Cambridge University Press.
- Bateson, Gregory. 2000. *Steps to an Ecology of Mind: Collected Essays in Anthropology, Psychiatry, Evolution, and Epistemology*. Chicago: University of Chicago Press.
- Bell, Daniel. 1973. *The Coming of Post-industrial Society: A Venture in Social Forecasting*. New York: Basic Books.
- Bennett, Tony. 2005. "Culture." In *New Keywords: A Revised Vocabulary of Culture and Society*, edited by Tony Bennett, Lawrence Grossberg, and Meaghan Morris, 63–69. Malden, MA: Blackwell.
- "Culture, n." 2014. *OED Online*. Oxford University Press.
- Flusser, Vilém. 2013. *Natural: Mind*. Translated by Rodrigo Maltez Novaes. Minneapolis, MN: Univocal Publishing.
- Foucault, Michel. 1970. *The Order of Things: An Archaeology of the Human Sciences*. New York: Vintage Books.
- Geertz, Clifford. 1973. *The Interpretation of Cultures: Selected Essays*. New York: Basic Books.
- Gleick, James. 2011. *The Information: A History, a Theory, a Flood*. New York: Pantheon Books.
- Grossberg, Lawrence. 2006. "Does Cultural Studies Have Futures? Should it? (Or What's the Matter with New York?)" *Cultural Studies* 20(1): 1–32.
- Guattari, Félix. 1995. *Chaosmosis: An Ethico-aesthetic Paradigm*. Translated by Paul Bains and Julian Pefanis. Bloomington: Indiana University Press.
- Hallinan, Blake, and Ted Striphas. In press. "Recommended for You: The Netflix Prize and the Production of Algorithmic Culture." *New Media and Society*.
- Haraway, Donna J. 1991. *Simians, Cyborgs, and Women: The Reinvention of Nature*. New York: Routledge.
- . 2006. "When We Have Never Been Human, What Is to Be Done?" *Theory, Culture & Society* 23(7–8): 7–8.
- Hayles, Katherine. 1999. *How We Became Posthuman: Virtual Bodies in Cybernetics, Literature, and Informatics*. Chicago: University of Chicago Press.
- Horkheimer, Max, and Theodor Adorno. 1997. "The Culture Industry: Enlightenment as Mass Deception." In *Dialectic of Enlightenment*, translated by John Cumming. New York: Continuum.
- Kittler, Friedrich. 2006. "Thinking Colours and/or Machines." *Theory, Culture & Society* 23(7–8): 39–50.
- Kroeber, A. L., and Clyde Kluckhohn. 1963. *Culture: A Critical Review of Concepts and Definitions*. New York: Vintage.
- Latour, Bruno. 1993. *We Have Never Been Modern*. Cambridge, MA: Harvard University Press.
- Manovich, Lev. 2013. *Software Takes Command*. New York: Bloomsbury.
- Marx, Karl. 1976. *Capital: A Critique of Political Economy*. Translated by Ben Fowkes. 3 vols. New York: Penguin Press.

- Marx, Leo. 1964. *The Machine in the Garden: Technology and the Pastoral Ideal in America*. New York: Oxford University Press.
- McNeil, Maureen. 2005. "Nature." In *New Keywords: A Revised Vocabulary of Culture and Society*, edited by Tony Bennett, Lawrence Grossberg, and Meaghan Morris, 235–39. Malden, MA: Blackwell.
- Parsons, Talcott. 1970. "Theory in the Humanities and Sociology?" *Daedalus* 99(2): 495–523.
- Peters, John Durham. 1988. "Information: Notes toward a Critical History." *Journal of Communication Inquiry* 12(2): 9–23.
- Pickering, Andrew. 2010. *The Cybernetic Brain Sketches of Another Future*. Chicago: University of Chicago Press.
- Readings, Bill. 1996. *The University in Ruins*. Cambridge, MA: Harvard University Press.
- Ross, Andrew. 2005. "Technology." In *New Keywords: A Revised Vocabulary of Culture and Society*, edited by Tony Bennett, Lawrence Grossberg, and Meaghan Morris, 342–44. Malden, MA: Blackwell.
- Schrödinger, Erwin. 1944. *What Is Life? The Physical Aspect of the Living Cell*. Cambridge: Cambridge University Press.
- Simondon, Gilbert. 1980. *The Mode of Existence of Technical Objects*. Translated by Ninian Mellamphy. University of Western Ontario. [https://english.duke.edu/uploads/assets/Simondon\\_MEOT\\_part\\_1.pdf](https://english.duke.edu/uploads/assets/Simondon_MEOT_part_1.pdf).
- Stiegler, Bernard. 1998. *Technics and Time: The Fault of Epimetheus*. Translated by Richard Beardsworth and George Collins. 3 vols. Stanford, CA: Stanford University Press.
- Striphas, Ted. 2009. *The Late Age of Print: Everyday Book Culture from Consumerism to Control*. New York: Columbia University Press.
- Terranova, Tiziana. 2004. *Network Culture Politics for the Information Age*. London: Pluto Press.
- Webster, Frank. 2005a. "Information." In *New Keywords: A Revised Vocabulary of Culture and Society*, edited by Tony Bennett, Lawrence Grossberg, and Meaghan Morris, 186–89. Malden, MA: Blackwell.
- . 2005b. "Network." In *New Keywords: A Revised Vocabulary of Culture and Society*, edited by Tony Bennett, Lawrence Grossberg, and Meaghan Morris, 239–41. Malden, MA: Blackwell.
- Wiener, Norbert. 1954. *The Human Use of Human Beings: Cybernetics and Society*. Rev. ed. Cambridge, MA: Da Capo Press.
- Williams, Raymond. 1958. *Culture and Society, 1780–1950*. New York: Columbia University Press.
- . 1961. *The Long Revolution*. Orchard Park, NY: Broadview Press.
- . 1974. *Television: Technology and Cultural Form*. Hanover, NH: Wesleyan University Press.
- . 1976. *Keywords: A Vocabulary of Culture and Society*. 1st ed. New York: Oxford University Press.
- . 1981. *The Sociology of Culture*. Chicago: University of Chicago Press.
- . 1983a. *Keywords: A Vocabulary of Culture and Society*. Rev. ed. New York: Oxford University Press.
- . 1983b. *Towards 2000*. London: Chatto & Windus.