



concepts of information

introduction (2)

Paul Duguid
duguid @ ischool.berkeley.edu
510 643 3894

203A South Hall

office hours
Thursday 11:30-1:00



definitional traps

"to purify the dialect of the tribe"

"The logic of definition is nowhere more crucial than with respect to the name of a field of scholarly enquiry ... The name of the field maps out essential characteristics ..."

Alvin Schrader,
"In Search of a Name," 1984

"the mud and slime of verbal imprecision"

"laxity in the use of the term"

Kenneth Sayre,
Cybernetics and the Philosophy of Mind,
1976



unifying concepts?

"For national decision makers, no better alternative is at hand than to accept the unifying concept of *information* and to undertake the planning of communication policies by doing resource analysis."

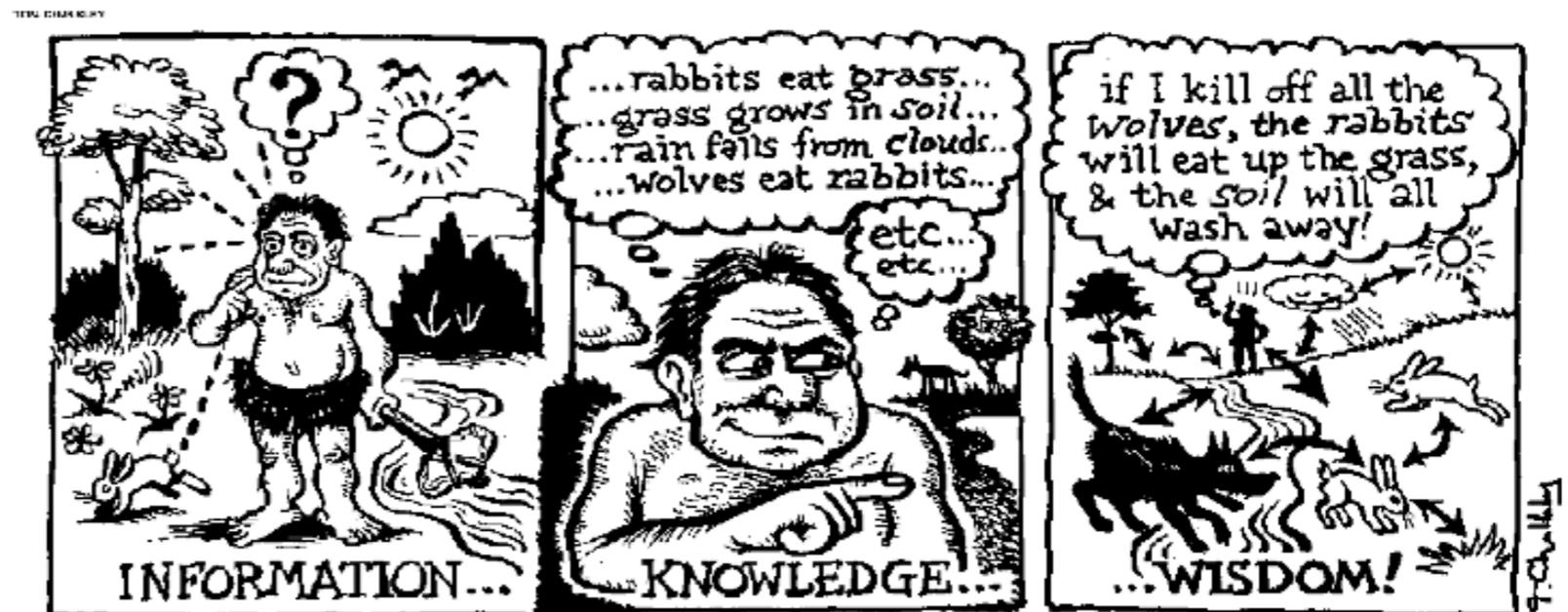
William H Read,
"Information as a National Resource," 1978



immutable mobile

"Information is information, not matter or energy. No materialism which does not admit this can survive at the present day."

Norbert Wiener,
Cybernetics,
1948



"On an average weekday, the *New York Times* contains more information than any contemporary of Shakespeare's would have acquired in a lifetime"



information's progress

The endless cycle of ideas and action
Endless invention, endless experimentation
Brings knowledge of motion, not of stillness
Where is the life we have lost in the living?
Where is the wisdom we have lost in knowledge?
Where is the knowledge we have lost in information?

T.S. Eliot, "Choruses from 'The Rock'"

[v. Daniel Bell, 1979, Harlan Cleveland, 1985 ...]

"Ars longa, vita brevis, occasio praeceps,
experimentum periculosum, iudicium difficile"

Hippocrates, 460 bce

"Such data may add considerable
useful information to our knowledge"

Science, 1981



information's progress

"A crucial distinction is made by Mr. Roszak [in the *Cult of Information*] between information, or data, and knowledge, that semantic embarrassment which computer zealots at best ignore and at worst disguise, calling it by such misnomers as 'knowledge systems.' Computers may excel at processing data. But, unlike humans, they are incapable of the original thought of which knowledge is created."

New York Times, 1987



information's process

"Mr. Lee, the South Korean Defense Minister, appeared before a National Assembly committee today and offered what some Koreans took to be an indirect apology for the episode. 'A lot of difficulty is involved in producing reliable information out of initial data or knowledge,' he said, pledging that the military would be more careful in the future in 'processing "information."'"

New York Times, 1987



Jonathan Dodson THE Book # 115
NEW WORLD
 OF
ENGLISH WORDS:
 Or, a General
DICTIONARY:
 Containing the Interpretations of such hard words as are
 derived from other Languages; whether Hebrew, Arabick, Syriack,
 Greek, Latin, Italian, French, Spanish, British, Dutch, Saxon, &c. their
 Etymologies and perfect Definitions:
 Together with
 All those Terms that relate to the Arts and Sciences; whether Theologic, Philo-
 sophy, Logic, Rhetoric, Grammar, Rhetoric, Law, Natural History, Astrick,
 Physick, Chirurgery, Anatomy, Chymistry, Botanicke, Mathematicke, Arithme-
 tick, Geometry, Astrology, Chymistry, Physicall, Navigation,
 Fortification, Dialling, Surveying, Astrick, Perspective, Architecture,
 Heraldry, Cosmographie, Mechanick, Statick, Merchandize, Jewelling, Painting,
 Graving, Husbandry, Harfemenfhip, Hanking, Hunting, Fishing, &c.
 To which are added
 The significations of proper Names, Mythology, and Poetical Fictions, Histo-
 rical Relations, Geographical Descriptions of most Countries and Cities of the World;
 especially of those three Nations wherein their chief Antiquities, Battles, and other
 most Memorable Passages are mentioned; as also all other Subjects that are useful, and
 appertain to our English Language.
*A Work very necessary for Strangers, as well as our own Countrymen, for all Per-
 sons that would rightly understand what they discourse, write, or read.*
 Collected and published by E. P. Dord. 1658.
 For the greater honour of those Learned Gentlemen and Artists
 that have been assilant in the most Practical Sciences,
 their Names are affixed in the next Page,
Dedit Dant hic quae ferunt. Virgil.
 London, Printed by E. Tyler, for Nath. Brooker at the Sign of the
 Angel in Cornhill, 1658.

coming into the language

hard words

Information, (lat.)

an informing, telling, or making known.

*Informatus non sum, a formal answer, made by an
 Atturny, that is commanded by the Court to say
 what he thinks good in defence of his Client
 Edward Philips, The New World of English Words
 or a General Dictionary: Containing the
 Interpretations of Such Hard Words as are
 Derived from Other Languages ..., 1658*



get over it

"I propose we get rid of the duplication of "knowledge and information." There are those who insist on distinguishing "information" from "knowledge" ... The specialist in "information theory" [ie Shannon] uses the word, as he frankly admits, in a "rather strange way" ... but it is not what is commonly meant by "information." ... *Webster's Dictionary* defines "information" as "knowledge communicated" Hence, in the ordinary uses of the word, all information is knowledge"

Fritz Machulup, *Production and Distribution of Knowledge*, 1962



pragmatism

"the science of management [comprises]
organization, communication, and
information" and information is
"recorded communication"

Henry Varnum Poor,
American Railroad Journal c1849

cp Alfred Chandler & James Cortada
A Nation Transformed by Information, 2000



change and change agent

"information is a pattern or design that rearranges data for instrumental purposes, while knowledge is the set of reasoned judgments that evaluates the adequacy of the pattern for the purpose ...

"if as Paul Valery said, electricity was the agent that transformed the second half of the nineteenth century, in a similar vein the computer has been the "analytical engine" that has transformed the second half...

"knowledge and information are becoming the strategic resource and transforming agent of the post-industrial society



causal theories?

"A more general diffusion of accurate knowledge regarding the state of public affairs would tend to check that excitement and party spirit which has often been created by misrepresentation or exaggeration, and has produced an annoyance to the government and at least a temporary disaffection of the public mind."

William Jacob,
"Observations and
Suggestions," 1832

18th century
Habermas & the public sphere?

19th century
century of the "fact"

John Sinclair, *A Statistical Account of Scotland*,
1791-99

George Porter, *A Manual of Scientific Enquiry*,
1849



conceptual change

historical change

Raymond Williams, *Culture & Society*, 1958

Raymond Williams, *Keywords*, 1976

John Brewer & Susan Staves,
Early Modern Conceptions of Property, 1996



conceptual change

"Men are the producers of their conceptions, ideas, etc. – real, active men, as they are conditioned by a definite development of their productive forces and of the intercourse corresponding to these, up to its furthest forms.

Consciousness can never be anything else than conscious existence, and the existence of men is their actual life-process. . . .

In direct contrast to German philosophy which descends from heaven to earth, here we ascend from earth to heaven. That is to say, we do not set out from what men say, imagine, conceive, nor from men as narrated, thought of, imagined, conceived, in order to arrive at men in the flesh. We set out from real, active men, and on the basis of their real life-process we demonstrate the development of the ideological reflexes and echoes of this life-process. Morality, religion, metaphysics, all the rest of ideology and their corresponding forms of consciousness, thus no longer retain the semblance of independence."



synchronous change

disciplinary wanderwörter

community

network

information

Fritz Machlup & Una Mansfield,

The Study of Information: Interdisciplinary Messages, 1983



the road ahead

Conception of Information syllabus