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Redefining knowledge in an information world – a polemic (0288)

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This paper looks at knowledge and information as different forms of the same ideas or “memes”. Very different, for knowledge is live, and information is dead. Knowledge is personal, difficult to acquire; information is plentiful, a commodity.

Dawkins coined the term meme to refer to a “unit of cultural transmission”. I distinguish between forms of the meme that are live knowledge – the internal idea, or imago, and the external transient representation of it, the ephemeron – and those which are permanent information (artefact and permaphemeron).

It is a mistake to talk of a “content-free” learning experience, as though content were “just information”. Content is knowledge.

The point of education is not just to regenerate live knowledge from one generation to the next, it is to extend and add to it through knowledge creation. And knowledge creativity does not operate in a knowledge vacuum. You need ideas to breed ideas.

Redefining knowledge in an information world – a polemic

Knowledge (*n*əʊˈlɛdʒ), *sb.* [ME. (n. dial.) *knawlage*, in Wyclif *knowleche*, f. stem of KNOW *v.* + *-leche* (unexplained; see N.E.D.). Pronounced (*n*əʊˈlɛdʒ) by some, after *know*.]

I. †1. Acknowledgement, confession; recognition of the position or claims (of any one) -1548. †2. Recognition -1611. †3. Legal cognizance. Chiefly *Sc.* -1732. †4. *gen.* Cognizance, notice; in *phr.* *to take k. of* -1623. 4. Wherefore haue wee afflicted our soule, and thou takest no k.? *Isa.* lviii. 3.

II. 1. The fact of knowing a thing, state, etc., or person; acquaintance; familiarity ME. †2. Personal acquaintance, friendship, intimacy. b. One's acquaintances. -1600. 3. Sexual intimacy. Now only in *carnal k.* (*arch.* and *legal*) ME. 4. Acquaintance with a fact; state of being aware or informed; consciousness (of anything) ME. b. *absol.* Acquaintance with facts, range of information, *ken* 1542. 5. Intellectual acquaintance with, or perception of, fact or truth; the fact, state, or condition of understanding. †Formerly, also, intelligence, intellect. ME. b. with *pl.* A mental apprehension; a cognition (*rare*) 1563. 6. Theoretical or practical understanding of an art, science, language, etc. ME. 7. The fact or condition of being instructed; information acquired by study; learning 1477. †8. Information; intelligence; intimation -1722. 9. The sum of what is known 1534. 10. (with *pl.*) A branch of learning; a science; an art. (Rarely in *sing.*) 1581. †11. A sign, mark, or token -1555.

1. His k. of human nature 1771. *Phr.* †*To grow out of k.*: to cease to be known. 4. The k. that a person is poor (*mod.*). b. *Phr.* *To one's k.*, so far as one is aware; also, as one is aware (in latter sense, also, *of one's k.*). *To come to one's k.* 5. K. implies .firm belief. .of what is true. .on sufficient grounds WHATELY. K. of nature JEVONS. 6. Practical K. of Navigation at Sea STURMY. 7. Hee that increaseth k. increaseth sorrow *Eccles.* i. 18. 9. Abundance of emptie and unprofitable k. 1628.

Figure 1 The Shorter Oxford English Dictionary definition of “Knowledge” (SOED, 1973).

The purpose of this paper is to avoid getting into the philosophic difficulties implicit in definitions. However, it begins and ends with a definition.

Ideas as memes

Knowledge was defined a long time ago, when it could safely be assumed that knowledge was only something inside a person's head. The definition propagated and some variants included the thing itself, as if it could exist out of someone's head (see 10 and 11 in Figure 1). I would like to redefine it to emphasise the living quality of knowledge, that it is *live*, in contrast to the artefacts and records of knowledge which we call information and which are *dead*. That is not to say that knowledge itself is living – though memeticists would say it was analogous to life – rather that it is a quality, condition or experience of something or someone living. It is those of their ideas that they believe to be true or (in the case of animals) act upon instinctively.

Likewise, in its original definition, it was taken for granted that the business of Education was with living people; it was about *live* ideas inside *live* heads.

Richard Dawkins coined the term meme to refer to a “unit of cultural transmission or unit of imitation”, a “replicator” – or, more simply, an idea – that moved from person to person by “cultural transmission”. Examples of memes are “tunes, ideas, catch-phrases, clothes fashions, ways of making pots or of building arches” (Dawkins, 1989). It is not entirely clear whether an example of a meme is a tune (external phenomenon of sound) or the idea of a tune (internal phenomenon of the mind). I think this an important distinction and have labelled the living internal idea *imago*, and the external transient representation of it, *ephemeron*. These are two forms of the same idea, the same meme. They are stages in its varied “life cycle”.

The “replication” of memes is partly undertaken by what we commonly refer to as Education.

Extending the example

So let us go back in time. Someone has an idea for a tune. They hum it. The *imago* in their mind is translated into an *ephemeron*. Others catch on. The tune spreads and becomes a folk-tune. The idea lives in people's heads as *imagos* (with slight variation) and occasionally is performed as an *ephemeron* (also with slight variation). Imagine how tenuous that knowledge is. A few people die and the tune dies. In the oral tradition, just remembering things accurately was regarded as significant. For how easily the tune could be lost.

But now writing is invented. For music, this was relatively late – some time in the middle ages. The tune is now captured in written form as an *artefact*, a score. It becomes information. The tune's future existence is relatively secure – as secure as paper and ink could make it – and the possibility of variation reduced, provided people can interpret the notation and reproduce the tune in performance. We think of bringing a tune “back to life” in translating it from *artefact* into *ephemeron* (and subsequent *imagos*).

In the last few decades we have been able to record such a performance, to “freeze” it so to speak, so that the *ephemeron* becomes a *perma-phemeron*, an *artefact* from which a particular *ephemeron* can be endlessly reproduced. It is, of course, information.

This brief description of the life cycle of a tune through various connected stages illustrates the precarious nature of its survival in the early oral tradition and its relatively secure survival, once it could be recorded as permanent information *artefacts*.

Live vs dead

Of the four stages in the life cycle, two are *live* (animate) – the *imago* which typically lasts as long as the person it belongs to, and the *ephemeron* which has only fleeting existence, the memory of which contributes to the *imagos* it represents. The other two are *dead* (permanent), the *artefact* and the *perma-phemeron*.

The tune itself can only mutate or inspire new tunes when it is *live*. Creativity only operates upon *live* ideas in someone's head. It only operates upon knowledge. To each of us, our knowledge is personal and valuable.

Conversely, information has become a commodity shared by all. What was once a local folk tune can become a global media phenomenon overnight. It also means it is not valued much at all.

Implications for Education

I began by asserting that knowledge was *live*, whereas information was *dead*. Education has to do with both knowledge and information, but the point of education is to generate knowledge – to regenerate the *imagos* of one generation into the minds of the next. Ideas breed ideas. Unless you have ideas in your head, you cannot have new ideas. Creativity abhors a vacuum.

Our mistake is to think that content is information and therefore cheap to come by and plentifully supplied. Content is knowledge. It is what changes inside one's head. It cannot be surgically implanted and must be learned by each person, arduously and personally. "Learning is experience. Everything else is just information" as Einstein is disputed to have said (see A and B below). Content are the memes which populate our process of learning and which represent the outcomes of that process.

So it is a mistake to aim at a "content-free" learning experience and to speak of "learning to learn" as a worthy learning outcome. The ideal graduate, someone whose head is empty of "stuff" but who "knows how to find anything out" – a sort of blankly ignorant genius attached to a Google-type system stocked with huge quantities of information – is a sterile chimaera.

Because ultimately the point of education is not just to regenerate existing (*live*) knowledge, it is to extend and add to it through knowledge creation. And knowledge creativity does not operate in a knowledge vacuum.

References

Dawkins, R., (1989) *The selfish gene* (2nd edn), Oxford University Press.

A: <http://www.goodreads.com/quotes/show/133135>

B: <http://www.idealearninggroup.com/learningModel.html>

Shorter Oxford English Dictionary, 3rd edn (1944), revised and reprinted 1973.