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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

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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-ephemeron_, 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-ephemeron.

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
A: [http://www.goodreads.com/quotes/show/133135](http://www.goodreads.com/quotes/show/133135)
B: [http://www.idealearninggroup.com/learningModel.html](http://www.idealearninggroup.com/learningModel.html)