PRECONDITIONS FOR USING MEMETICS IN LANGUAGE EVOLUTION STUDIES

By Joseph Poulshock, Doctoral Student, Department of Theoretical and Applied Linguistics, Language Evolution and Computation Unit, University of Edinburgh, Supervisor: Jim Hurford

Although there are various forms of memetics, its most expansive versions claim to explain all the complexities of culture and the ministrations of mind. This attempt at a broad explanatory framework for memetics therefore also includes the origin and grounding of human language. Memetics may provide some helpful explanatory tools for researchers working on the problem of language evolution. However, before applying a memetic approach, scholars interested in language evolution will need to review the basic theoretical and empirical issues facing the field. To date, the most scientific and scholarly critique of memetics is Aunger et al (2001) where numerous scholars from diverse disciplines outline the problems and potentials with the approach. The following outline summarizes a number of these issues facing memetics.

1) **Lack Of Consensus As To What Memetics Actually Is.**
    a) This lack of clarity includes the fact that there is no standard codification of the concept, the distinct "meme as germ" and the "meme as gene" schools, and other areas of disagreement that relate to the issued listed below.
2) **Problematic Aspects of Radical Memetics (Blackmore 1998)**
    a) To a degree, Blackmore can be credited with the level of popularity and scholarly debate on memetics today. However, many consider her views radical because of the following issues.
    b) Blackmore claims that imitation is the sole mechanism for memetic replication. However, there are many problems with this claim.
        i)   Imitation cannot account for the more complex processes of how concepts are transmitted abstractly, such as through recombination, deduction, induction, and abduction.
        ii) Moreover, counter examples abound. Conte (2001) shows the opposite of imitation may cause cultural trends--where people behave a certain way because they do not want to imitate others. Sperber (2001) claims localized instructions, instead of blueprints transmit culture. Boyd and Richerson (2001) work incorporates other Darwinian population processes, besides natural selection, which are not based on replication and may cause cultural evolution.
        iii) Hence, it will be prudent for scholars wishing to apply the memetic approach--to not over-limit their research by focusing only on imitation, but also look at other means of replication.
    c) Blackmore (1998) and Dawkins (1976) claim that memes exert power over their own reproductive fitness. However, to-date there is no evidence for this independent replicator dynamic in memes.

3) **The Potential of Memetic Research**
    a) In spite of these problems, Hull (2001) reminds us that the standards for memetics may have been set too high--higher than even now established sciences could attain in their early stages. Thus, Hull urges memeticists to postpone definitional issues; concentrate on results, which can dialectically refine conceptual conundrums. He thus positively advises memeticists to

develop their theory in the context of testing it. And he suggests the following specific goals.
   i)   Generate beliefs about conceptual change.
   ii) Reconstruct conceptual phylogenies.
   iii) Develop an understanding of the mechanisms of memetic transmission, especially regarding replication and relevant environmental interactions.
   b) On the cautionary side, Hull acknowledges that meme researchers must remember that information theorists cannot distinguish between the replication of information and its implementation. Hence, memeticists will need to clarify the difference between memes and memetic phenotypes.

4) **Diplomatic Problems with Memetics**
   a) Some meme research has alienated anthropologists and other scholars in the humanities for failing to enjoin the vast literature on culture (and for sometimes making grandiose claims without empirical results). For memeticists to escape this already merited criticism, they must avoid this deficiency the future.
   b) Additionally, some aspects of radical memetics tend to confuse metaphysical presuppositions with empirical conclusions.   For example, eliminative materialism is not a conclusion supported by empirical memetic research but rather a philosophical presupposition of some scholars who advocate memetics. This confusion between philosophy and science and its extreme reductionism applied to culture and mind has alienated some scholars in sociology, anthropology, and psychology.

5) **Empirical Problems with Memetics**
   a) Memeticists face the challenge of not only getting results but also designing necessarily ingenious experiments in order to obtain them.
   b) In this empiricism, they must find actual memes and a mechanism for their replication.
   c) Moreover, for memetics to serve the science of culture, evidence must emerge for an independent replicator dynamic for cultural change--that is at least partly separate from human intentional and intelligent agency.
   d) This problem is made more complex by the fact that since culture is a comprehensive and consistent totality of elements (and thus intrinsically hard to define and reduce). Hence, it is highly dubious that memetics will ever become an all-encompassing theory of culture--and the minds that produce it.

6) **Conclusion**
   a) With this background in mind, however, it should be possible for scholars interested in language evolution to cautiously apply the memetic approach. For example, following Hull (2001) and working with the premise that memes minimally inhere in the linguistic element of culture, and that culture replicates itself partly through this memetic aspect of language, language evolution studies can focus on:
      i)   Generating and testing beliefs about the relationship between the memetic aspect of language and conceptual change.
      ii) Ways of reconstructing conceptual phylogenies by focusing on their linguistic aspects.
      iii) Developing an understanding of the mechanisms of memetic transmission, especially regarding replication and relevant

environmental interactions, focusing on the concrete role of language in the process.

- iv) Attempting to differentiate between language based memes (sets of moral instructions, for example) and their phenotypes (the different ways these instructions and their variants produce various behaviors).
- v) Generating and testing beliefs about the independent replicator dynamic of certain linguistically based memes, especially in relationship to cross-cultural differences, and the relative fitness of these memes in different cultural environments.

b) The above list of potential research areas does not begin to inquire into the origins of language, culture, and mind. However, this approach may be more realistic and less grandiose than some of the more radical versions of memetics. Hence, it may not only reveal some empirical results but also help scholars avoid the disregard associated with the more extreme, inflated, and non-scientific aspects of memetics.

References

Aunger, R. 2001. (Ed.) *Darwinizing Culture: The Status of Memetics as a Science*. Oxford University Press.

Blackmore, S. 1998. *The Meme Machine*. Oxford University Press.

Boyd, R. & P. Richerson. 2001. Memes: Universal Acid or a Better Moustrap. In Aunger, R. (Ed.) *Darwinizing Culture: The Status of Memetics as a Science*. Oxford University Press.

Conte, R. 2001. Memes Through Social Minds. In Aunger, R. (Ed.) *Darwinizing Culture: The Status of Memetics as a Science*. Oxford University Press.

Dawkins, R. 1976. *The Selfish Gene*. Oxford University Press.

Hull, D. 2001. Taking Memetics Seriously: Memetics Will Be What We Make It. . In Aunger, R. (Ed.) *Darwinizing Culture: The Status of Memetics as a Science*. Oxford University Press.

Sperber, D. 2001. An Objection to the Memetic Approach to Culture. In Aunger, R. (Ed.) *Darwinizing Culture: The Status of Memetics as a Science*. Oxford University Press.