Position Paper

Social Groups and Infectious Ideas

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Social groups are important accelerants of infectious ideas. While ideas may have varying significance, or attraction, in the minds of individuals, several factors must come into play for them to become "infectious", that is, to spread widely and rapidly, or become "viral". Certainly, social media on the Internet affords broad dissemination of ideas so that they are likely to be encountered by a large number of people, but there are many ideas of widely differing sorts on the Internet and only a few become infectious. It could be claimed that only these few ideas have sufficient valence, that is, to be attractive to enough users, to enable them to become infectious. In order for an idea to have a high degree of attractiveness to someone, it must match with their current beliefs in some significant way to cause them to reproduce it and thus contribute towards its infectiousness. The enormous range of variability of ideas across individuals seems likely to make it possible that such a match will occur in some individuals, but such variability also inhibits infectiousness which depends on such a match occurring in a large number of individuals who have the same background beliefs. We hold the position that social groups serve to overcome obstacles to the infectiousness of ideas and greatly accelerate some ideas to the level of infectiousness.

Early anthropological studies of pre-literate societies posited that social groups, totems, moieties, clans, etc. served to represent categories of nature[1] and thus served the role of "things to think with".[2] For the major portion of human existence, which was pre-literate, social groups represented collections of ideas organized around logical classifications of nature. Reference to these physical, social groups served to maintain and propagate knowledge of the natural world. Recent philosophical studies of cognition refer to such a bootstrapping process as "existential cognition".[3] It is the process by which we rely on the environment and structures that we set up in it in order to augment our memory, skills, and the organization of our behavior. Rarely do we make decisions based on analysis of all relevant facts gathered beforehand. Rather, we typically decide things because we belong to one or another social group, political party, religion, group of brand buyers, sports team fan base, or socio-economic identity group. Such decisions are based on selections already made within the membership of such groups that we accept when we choose to join such groups. By being a member of many such groups at the same time, each of which represents some domain of our interests, the fabric of these social groups becomes for us an externalized cognition, a cultural memory and a facilitator of efficient decision-making.

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[1] Emile Durkheim and Marcel Mauss (1963). Primitive Classification, translated from French by Rodney Needham. Chicago, University of Chicago Press.

[2] Claude Levi-Strauss (1962). The Savage Mind, translated from French. Chicago, University of Chicago Press.

[3] Andy Clark (1997). Being There: Putting Brain, Body, and World Together Again. Cambridge, Massachusetts, MIT Press.

By interfacing between the rapidly-increasing number of ideas available to us and our dependence upon social groups to cognitively assist us, social groups serve to mediate and accelerate the spread of certain ideas in the world. If we become affiliated with and accept "membership" in a particular group, we will tend to use its ideas and propagate them in our own behavior. We will do so without analysis of each idea or a full comparison of all its features and those of all the alternatives. The tendency to do this became part of human cognition hundreds of thousands of years ago, and evolution has not yet changed this dependency in spite of recent rapid technological advances and instant World-wide communication.

Such dependence upon social groups for cognitive bootstrapping creates several problems in the globally-connected world. One of these problems is that groups holding alternative ideas tend to sharpen their differences in competition for new members and the resulting polarization can have harmful side-effects. Another problem is that there are now many different social groups to which anyone is exposed, creating a problem of sorting through a very large set for those few with which we will associate. These are important issues to study in research on media impacts on global society.

In two recent papers[4][5], we have presented a framework for beginning such study, but it is only a hint at how to start. A workshop was also held for government participants by MITRE in 2005 on "Infectious Ideas" in order to stimulate interest in programmatic efforts to define research in these areas. The establishment of a center to study such phenomena is an important step in characterizing what may be a new field of research created by the impact of new, global media on long-established cognitive dependencies of humans.

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[4] Strong, G.W. and Bainbridge, W.S. (2003) "Memetics: A Potential New Science," pp. 318-325 in Converging Technologies for Improving Human Performance, edited by Mihail C. Roco and William Sims Bainbridge. Dordrecht, Netherlands: Kluwer.

[5] Booker, L. and Strong, G. (2008). Using topic analysis to compute identity group attributes. In H. Liu, J. Salerno, and M. Young (Eds.), Social Computing, Behavioral Modeling and Prediction. New York, Springer.