

# The Anthropology of Knowledge: From Basic to Complex Virtual Communities in the Arts and Humanities

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An online community may be defined very simply as any group of people who collaborate regularly and/or formally using internet technologies. Such communities are becoming increasingly important in arts and humanities research. They include blogs, wikis, mailing lists and other such fora. The Jiscmail and Listserv services (<http://www.jiscmail.ac.uk>; <http://www.lsoft.com>), and the availability of well-known open source wiki and blog software (e.g. <http://www.mediawiki.org/wiki/MediaWiki> and <http://twiki.org>) have made it so easy to establish online communities that most projects in the digital and humanities now have one of some kind or another. However such fora are founded on relatively basic technologies. The various arts and humanities e-science and cyberinfrastructure programmes underway in many countries offer huge opportunities to enable online communities in ways that go far beyond what is generally available now. These approaches will be based on incomparably more complex tools, methods and technologies such as Virtual Organizations (VOs), Virtual Research Environments (see <http://www.ahessc.ac.uk/briefing-paper>) collaborative virtual workspaces, and Semantic Web. If these tools, methods and technologies are to be exploited by practice-led arts researchers and humanists to the greatest effect, they will need to be grounded in a strategic, rigorous and systematic understanding of the behaviours of current online communities, as complex online systems will clearly evolve from collaboration tools currently in use. The proposed paper will offer an overview of current usage of various online fora, and propose a high-level mapping from that overview onto the capabilities of the e-science-based collaborative systems of the future, such as MyVocs (<http://www.myvocs.org/>).

Of immediate importance to the humanities are VREs, as they help geographically dispersed research groups to come together in virtual laboratories that allow modelling and experimentation as much as discussion of research results. The e-Science concept of a Virtual Organisation on the other hand is seen as a set of

institutions and/or individuals defined by resource sharing policies.<sup>1</sup> A VO is a community with the will to share resources and information across the internet, while VREs enable VOs by adding tools and methods that help the community to work together and share resources in a secure manner. VREs attempt to bring together researchers across disciplines and administrative boundaries. Many argue that humanities computing in general constitutes such an attempt, where the 'glue' is to find 'methodological commons'<sup>2</sup> to present the disciplinary kinships among different disciplines in the humanities and in computing. A hi-tech VRE for arts and humanities computing could therefore make these computational methods the subject of online discussions enabled by advanced information discovery technologies. As a case study, this paper will report on our efforts to set up such a VRE.

The Arts and Humanities e-Science Support Centre (AHESSC) is in regular and direct contact with many online communities, and is in an excellent position to offer an overview. We will present findings from detailed research on the recent history of a range of existing discussion fora. These will include both moderated and unmoderated groups critically and qualitatively assessing the difference this makes, and extrapolate an agenda for the management systems needed for VREs. We will examine both direct and indirect links between messages, semantic commonalities, disciplinary vocabularies and threading patterns, and hyperlinking behaviour. We will also examine other well-established wiki and blog communities of relevance to the humanities in much the same way. The paper will draw out commonalities, identify points of conflict and the reasons underlying them, the implementation and practice of 'netiquette' codes, and the importance of sustaining archives and maintaining access to them. We argue that regardless of the technology, these are essential questions if the adoption of advanced collaborative tools is to be a success. A key remit of AHESSC itself is to help develop a community of e-science 'early adopters', and the research presented forms a central part of this mission. We believe that more complex collaborative technologies will not only enable the transmission of 'traditional' scholarly communication in the form of text and images as in the current basic systems; but also they will facilitate access to large scale, complex and fuzzy data, and allow scholars to work together in real time with that data. For example, instead of sending a complex dataset as an email attachment to a group whose members then manipulate it according to their expertise and locally available software, and then send it back to the originator, the new architectures will allow two or (many) more to work on it in real time, to discuss it, expose it to analytical tools, and to annotate it online, whilst preserving a complete record of the workflow. We will show how close critical analysis of the existing lo-tech systems should inform the design of such architectures.

This will be illustrated by considering a VRE for arts and humanities computing methodologies for which funding is currently being sought. This project will continue the community building efforts of the UK's AHRC ICT Methods Network (see <http://www.methodsnetwork.ac.uk>), with a taxonomy of computational methods developed by the Arts and Humanities Data Service (see [http://ahds.ac.uk/about/projects/documents/pmdb\\_taxonomy\\_v1\\_3\\_1.pdf](http://ahds.ac.uk/about/projects/documents/pmdb_taxonomy_v1_3_1.pdf)). This is seen as a first step to build a semantically enriched VRE, using the taxonomy as the foundation of an ontology. The taxonomy will be verified against papers from online databases or websites presenting tools and methods. Ontological approaches are used that allow not only the semantic integration of different text and multimedia resources, but also the tracking of exchanged arguments that help users better understand decisions about methodologies. Our paper will illustrate the evolutionary relationship between an advanced environment such as this, and the basic environments with which we are all familiar.

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1. Foster and C. Kesselman, *The Grid 2: Blueprint for a new computing infrastructure*, (Morgan-Kaufmann, 2004).
  2. See Willard McCarty *Humanities Computing*, (Basingstoke: Palgrave MacMillan, 2005).