

Too much ‘digital’, too little ‘humanities’? An attempt to explain why many humanities scholars are reluctant converts to Digital Humanities

by

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What for – what ultimately for? What do men live by – the questions work and tell at what I can only call a religious depth of thought and feeling...It is characteristic of Snow that ‘believe’ for him should be a very simple word. ‘Statistically’, he says...in that spirit of practical wisdom about the human future...

F.R. Leavis, ”Two Cultures: The Significance of C.P. Snow” (1962)

At the unveiling of Apple’s new iPad 2 at a special event in San Francisco on March 2, 2011, Steve Jobs told his audience that about 15 million iPads had been sold in 2010 already. What made the iPad so successful, Jobs speculated, is the attitude behind this and every other Apple product that technology is not enough, but has to be married with liberal arts and the humanities in general.¹

Jobs did not on this occasion refer to what has come to be known as ‘Digital Humanities’ (DH). Though DH at this point is not so much a unified field as ‘an array of convergent practices,’² he might well have done so in that this comparatively new discipline is a field of study, research and teaching which is concerned with the intersection of digital technologies and the disciplines of the humanities. “A history of the humanities in the 20th century could,” Patricia Cohen wrote in an

¹ Steve Jobs’ announcement may be watched at <http://www.youtube.com/watch?v=qQG0XfU-bFs> (last accessed on November 7, 2011).

² This phrase is taken from the *Digital Humanities Manifesto 2.0*. The original *Digital Humanities Manifesto* was authored by Todd Presner (UCLA) and Jeffrey Schnapp (Harvard University), for the Mellon Seminars in Digital Humanities at UCLA. The 26 statements of the original Digital Humanities Manifesto then evolved into the 50 positions of Version 2.0 from 2009 which is available at www.humanitiesblast.com/manifesto/Manifesto_V2.pdf (last accessed on November 7, 2011). The quotations used in this article are from this document.

article in the *New York Times* series on Humanities 2.0 in November 2010, “be chronicled in ‘isms’ – formalism, Freudianism, structuralism, postcolonialism – grand intellectual cathedrals from which assorted interpretations of literature, politics and culture spread. The next big idea in language, history and the arts? Data.”³ Instead of looking for new ‘isms’, digitally savvy humanists now argue, we should start looking at how technology is currently changing our understanding of what it means to do liberal arts.

Data is indeed crucial. DH, most of its practitioners would agree, is very much about method, about the use of powerful new technologies and vast amounts of digitized materials that were not available to humanities scholars in the past. Some have argued that with DH, we move into a ‘post-theoretical age’ – that ours is a ‘methodological moment’ in which scholars will increasingly preoccupy themselves with collecting and cataloging the flood of information that each new day brings us.⁴ Pioneering efforts began many years ago, but many, if not most, of my colleagues in the humanities remain unaware of what DH have to offer. Few seem to know, for example, that the Faculty of the Humanities at the University of Copenhagen – together with a number of other educational and cultural heritage institutions in Denmark – has joined in a proposal to establish a Digital Humanities Lab (DigHumLab) which will serve the whole nation. It is expected that the Danish Agency for Science, Technology and Innovation will fund DigHumLab for 5 years, starting in 2011 or 2012, and that the lab will coordinate and develop a national research infrastructure within the humanities.⁵

DigHumLab will be part of DARIAH (Digital Research Infrastructure for the Arts and Humanities) – a large-scale project, which is jointly coordinated by Germany and France, officially supported by

³ Patricia Cohen, “Digital Keys for Unlocking the Humanities’ Riches,” *New York Times*, November 16, 2010 – available at <http://www.nytimes.com/2010/11/17/arts/17digital.html> (last accessed on November 7, 2011).

⁴ Ibid.

⁵ See *DARIAH Newsletter*, No. 8, Spring 2011 – available at http://www.dariah.eu/documents/DARIAH_Newsletter-8_Spring2011.pdf (last accessed on November 7, 2011).

the European Union and now includes many different European countries.⁶ In the U.S., too, the humanities and social sciences are emerging domains for using digital media. Teaming up with the National Science Foundation and institutions in both Canada and Britain a couple of years ago, the National Endowment for the Humanities created a grant program, Digging Into Data Challenge, which is meant to push research in a digital direction. As the director of the NEH's office of digital humanities puts it, "technology hasn't just made astronomy, biology and physics more efficient. It has let scientists do research they simply couldn't do before."⁷

One of the latest expressions of digital humanities is 'culturomics' – the exploration of humanity's culture genome. First, there was genomics, the mapping of human genomes. Then, there was proteomics, the mapping of human proteins, and now, in addition, there is culturomics, the mapping of human culture. The idea, which was presented in the journal *Science* in December 2010, is that just as petrified fossils may tell us something about the evolution of life, so the words written in books may help to narrate the history of humanity.

Having gained access to Google Books and the over 15 million books thus far digitally scanned, a team of Harvard University scientists has been able to uncover certain patterns – to make a record of sorts of human culture, spanning six centuries and seven languages. The hope is that by analyzing the growth, change, and decline of published words over the centuries with a mathematical technique borrowed from evolutionary biology - a so-called 'n-gram' database - it should be possible to come up with a study of the evolution of culture on a very grand scale.⁸

⁶ Ibid.

⁷ Brett Bobley, quoted in Patricia Cohen, "Digital Keys for Unlocking the Humanities' Riches." See also Tony Hey, Stewart Tansley, and Kristin Tolle (eds.), *The Fourth Paradigm: Data-Intensive Scientific Discovery* (Microsoft Research, 2009 - available at <http://research.microsoft.com/en-us/collaboration/fourthparadigm/contents.aspx>), which makes a similar argument for the data intensive sciences, highlighting the environment and healthcare – and Michael Nielsen, *Reinventing Discovery: The New Era of Networked Science* (Princeton University Press, 2011), which argues that the Web is amplifying communication and accelerating discovery in unexpected ways, making for extraordinary problem solving.

⁸ John Bohannon, "Google Opens Books to New Cultural Studies," in *Science*, Vol. 330, 17 December 2010, 1600.

Google has since released this database, and this has made it possible for the public to participate in exploring humanity's culture genome along with the researchers.

The project initially faced one serious obstacle. Much of the content of Google Books is protected by copyright and as Google is currently involved in class-action lawsuits brought by book publishers and authors, this very content is surrounded by a good deal of legal uncertainty.⁹ The use of the n-gram database made it possible for the Harvard team to do quantitative research on the digitized books without actually reading them, however, thus avoiding a violation of copyright law – at least for the present.

In the case of culturomics, technological ingenuity 'won' – intellectual property law was circumvented. So were, at least to a certain extent, the humanities; much like digital humanities as a whole, culturomics is a wake-up call to the humanities “that there is a new style of research that can complement the traditional styles,” as John Orwant, a computer scientist and director of DH initiatives at Google puts it.¹⁰ The reaction on the part of humanities scholars and writers to culturomics, DH and digital media as a whole has accordingly been somewhat mixed; while some react with enthusiasm, others think that all talk of n-gram databases and other 'tech-speak' should be banned from the humanities.

In what follows, I shall look at some of the reasons behind the skeptical attitudes toward DH on the part of my fellow humanities scholars. The focus will be on the research-side of things – the ways in which DH will change how we think and do our research. By far the major part of the reluctance felt, and sometimes voiced, by humanities scholars concerns the implications of DH for research. Most of us are aware of the huge benefits for teaching and for the dissemination and popularizing to a wider audience of knowledge that DH can bring. It is with some of the grander claims by

⁹ For a quick overview of the lawsuits, the Google Book Settlement and the rejection of a Federal judge of this settlement, see <http://publishing.about.com/od/LibrariesAndReferencePublish/a/The-Google-Book-Settlement.htm>.

¹⁰ John Orwant, quoted in Bohannon, "Google Opens Books to New Cultural Studies".

proponents of DH concerning our research that humanities scholars may have a problem. Whereas much has been written on the implication of new technologies for communication and collaboration as well as for education (at all levels), only a few writers have concerned themselves with how those technologies transform scholarly research.

This paper is divided into three parts. In the first part, I shall look at some of the definitions that have been offered on DH – what it *is* and what it means to be a DH scholar. Within the past few years, there seems to have been a discursive shift from ‘humanities computing’ to DH. According to the *Digital Humanities Manifesto 2.0*, the first wave of humanities computing was a quantitative one – one in which computing technologies were used on traditional humanities materials. During this wave, the humanities were being led or being modified by the technological/digital. But with the second wave of DH, the visions and the initiatives come from *within* the humanities. “The key words are **qualitative, interpretive, experiential, emotive, and generative** and digital toolkits are being used in the service of the Humanities’ core methodological strengths: attention to complexity, medium specificity, historical context, analytical depth, critique and interpretation.”¹¹

It is with this discursive shift that the problems really start, as far as reluctant converts to DH are concerned. As long as the new technologies were being used as tools only, they were considered to be a big help because they did not in any major way challenge traditional ways of thinking. As DH have come to be practiced, however, we are no longer talking about processing and statistically analyzing large collections of text, but rather about the changes that digital technologies are producing or generating across the many fields of humanist inquiry. In the second part of the paper, I shall revisit the debate between C.P. Snow and F.R. Leavis in the late 1950s and into the 1960s on ‘the two cultures.’ In contemporary debates about the pros and cons of DH, there are certain echoes

¹¹ *Digital Humanities Manifesto 2.0* – emphases in the original.

of that old, famous debate, and I hope to be able to clarify some of the underlying issues by outlining what ‘the Leavis/Snow controversy,’ as it has since come to be known as, was all about.

Finally, in part three of my paper, I will move back to the contemporary picture in order to offer my own summary of the situation. My argument throughout is that DH may make a very important contribution to humanities research in the future – provided we don’t forget the humanities part of DH, don’t get carried away with the digital part and all its possibilities to such an extent that we forget the core strengths of the humanities. This was Leavis’s argument vis-à-vis Snow – that his technological enthusiasm left neither time nor room for the more contemplative values that characterize the humanities at their best. What Snow had said in his lecture, to which Leavis was responding, was that there was, among humanities scholars, a highly negative attitude towards the natural sciences – a negative attitude which made these scholars unable and unwilling to believe in technological progress. As long as this unwillingness to interest themselves in the major new technological breakthroughs of the time only concerned themselves, so be it. But, when this unwillingness spilled over into a lack of understanding for the possibilities that modern technology presented for bettering the conditions of the less well off around the world, then it became a big problem.

As I see it, both Snow and Leavis presented good arguments – in their separate ways, each was right, and we ignore their advice at our peril today where DH presents us with the possibility of bridging the gap between the two cultures in a very concrete way. The ultimate vision of DH enthusiasts is to move even further – to create nothing less than a second Renaissance. This may be overkill, but we should at least be prepared to hear them out.

I. Digital Humanities – history, definitions, uses, and visions

In their introduction to *A Companion to Digital Humanities* (2004), editors Susan Schreibman, Ray Siemens and John Unsworth talk about the goals that have animated the discipline from the outset: “Using information technology to illuminate the human record, and bringing an understanding of the human record to bear on the development and use of information technology.”¹² Though very broad, this gives us the beginnings of a definition – but of what: humanities computing or DH?

Referring to research done by Matthew Kirschenbaum, Kathleen Fitzpatrick tells us of the specific history of the term ‘digital humanities.’ The original title of the manuscript, which would become the above-mentioned companion to DH, was “A Companion to Humanities Computing.” Blackwell Publishers were not too keen on this title, though – a problem John Unsworth solved by instead suggesting the term ‘digital humanities.’ He thereby gave a new name to the field: “Digital humanities thus grows specifically out of an attempt to make ‘humanities computing,’ which sounded as though the emphasis lay on the technology, more palatable to humanists in general.”¹³ With ‘humanities computing,’ the focus was indeed on the technology – on the way in which computing methods could be applied to textual materials and thereby open them up to textual analysis. Fitzpatrick mentions, as examples of such humanities computing, projects of an editorial and archival nature, which have produced and opened up large digital text collections for scholarly research, and author-attribution studies or studies relying on the processing and data mining of large collections through statistical analyses of linguistic features of the texts in question.¹⁴

A brief history

Beginnings: humanities computing

¹² Susan Schreibman, Ray Siemens and John Unsworth, „The Digital Humanities and Humanities Computing: An Introduction,“ in Schreibman, Siemens and Unsworth (eds.), *A Companion to Digital Humanities*, xxiii.

¹³ Kathleen Fitzpatrick, „The Humanities, Done Digitally,“ *The Chronicle of Higher Education*, The Digital Campus, May 8, 2011 – available at <http://chronicle.com/article/The-Humanities-Done-Digitally/127382/>, last accessed on November 7, 2011.

¹⁴ Ibid.

From the very beginning, “humanities computing has had to embrace ‘**the two cultures,**’ to bring the rigor and systematic unambiguous procedural methodologies characteristic of the sciences to address problems within the humanities that had hitherto been most often treated in a serendipitous fashion” (my emphasis).¹⁵ And by contrast to what has been the case with many other interdisciplinary endeavours, the beginnings of humanities computing can be traced very concretely to the year 1949. This was the year in which the Italian Jesuit priest, Father Roberto Busa, had the idea of making an *index verborum* of the approximately 11 million words of medieval Latin to be found in the works of St Thomas Aquinas and related authors. Busa paid a visit to IBM in the U.S., hoping that the computers he had read about might help him produce printed volumes. He found the help and support he needed and was able to publish the first volume in 1974. There are examples of quantitative studies of word frequencies and authorship style which predate computers,¹⁶ but it was really only with the advent of computers that it became possible to record these things more accurately.

The first use of computers in a disputed authorship study is believed to be the one undertaken on the Junius Letters by Alvar Ellegård and published in 1962.¹⁷ The early 1960s also saw the attempt by Frederick Mosteller and David L. Wallace to identify the authorship of the Federalist Papers¹⁸ – their findings having since been acknowledged as a test for new methods of authorship discrimination – as well as the founding of some centers for the use of computers in the humanities.

¹⁵ Susan Hockey, „The History of Humanities Computing,“ in Susan Schreibman, Ray Siemens and John Unsworth (eds.), *A Companion to Digital Humanities* (Malden, MA & Oxford, UK: Blackwell Publishing, 2004), 3. For the outline in next few paragraphs of the history of humanities computing I’m relying on Hockey’s article.

¹⁶ Hockey writes: „For example, Augustus de Morgan in a letter written in 1851 proposed a quantitative study of vocabulary as a means of investigating the authorship of the Pauline Epistles and T.C. Mendenhall, writing at the end of the nineteenth century, described his counting machine whereby two ladies computed the number of words of two letters, three, and so on in Shakespeare, Marlowe, Bacon, and many other authors in an attempt to determine who wrote Shakespeare.“ Ibid. 5.

¹⁷ Alvar Ellegaard, *A Statistical Method for Determining Authorship: The Junius Letters* (Gothenburg: Gothenburg Studies in English, 1962).

¹⁸ Frederick Mosteller and David L. Wallace, *Inference and Disputed Authorship: The Federalist* (Reading, MA: Addison-Wesley, 1964).

Roy Wisbey established the Centre for Literary and Linguistic Computing in Cambridge in 1963 in order to carry out work on Early Middle High German texts, and Wilhelm Ott organized a group at the University of Tübingen around developing programmes for text analysis. The journal *Computers and the Humanities* dates from 1966. It was edited by Joseph Raben and became an important tool for spreading information about humanities computing. Work in this early period, Susan Hockey tells us, tended to run into all kinds of problems with the new technology – and “what is characteristic is that key problems which [these early researchers] identified are still with us, notably the need to look at ‘words’ beyond the level of the graphic string, and to deal effectively with variant spellings, multiple manuscripts, and lemmatization.”¹⁹

The 1970s through the mid-1980s may, Hockey argues, be seen as a period of consolidation. More people were using the methodologies developed by the early, pioneering researchers of the 1960s, and the dissemination of information was furthered by a regular series of conferences, starting with a symposium in Cambridge in 1970 which set off a biennial series of conferences in the UK. These became major focal points for computing in the humanities. The papers produced for these conferences and other events needed a publishing outlet – one of the reasons for the founding of the *Bulletin* of the Association for Literary and Linguistic Computing at a meeting in King’s College London in 1973. At around this time, a series of conferences also began in the U.S. The International Conference on Computing in the Humanities (ICCH) as these conferences became known would alternate with the UK meetings. They offered a broader thematic range – papers were given on topics such as the use of computers in teaching and writing, as well as in music, art, and archaeology – and in 1978, they developed into the Association for Computers and the Humanities. “A glance through the various publications of this period shows a preponderance of papers based on vocabulary studies generated initially by concordance programs,” writes Hockey. “The results were

¹⁹ Hockey, „The History of Humanities Computing,“ 7.

of interest either for some kinds of stylistic analyses or for linguistic applications. Increasingly complex mathematics were brought to bear on vocabulary counts, leaving some more humanities-oriented scholars out in the cold.”²⁰

Many of the most significant developments in the period from the mid-1980s to the early 1990s stem from the advent of two new technologies, the personal computer and electronic mail. Other significant developments happened in part, Hockey explains, due to the increase in computer usage in this period and in part due to the need to reduce duplication of effort. By the mid-1980s, many facilities for sending and receiving electronic mails internationally were in place. Ansaxnet, the first electronic discussion list for the humanities, was founded in 1986 and the following year *Humanist*, which has been central to the maintenance of the humanities computing community and has become a model for other electronic discussion lists, was started. In terms of intellectual development, Hockey argues, one particular event stands out: the development of the Text Encoding Initiative (TEI) *Guidelines for Electronic Text Encoding and Interchange*. The first full version appeared in May 1994, and work within the TEI resulted in an interest in the representation of information and knowledge coming from the humanities as a topic in its own right. The publication of the TEI Guidelines furthermore ”coincided with full-text digital library developments and it was natural for digital library projects, which had not previously come into contact with humanities computing, to base their work on TEI rather than inventing a markup scheme from scratch.”²¹

The Internet dates from 1983 and with the arrival, in the early 1990s, of the World Wide Web a new group of users have emerged – users who have found out that anyone can publish on the Web and promote their activities, as individuals but also in collaboration with others. There are no limits on size, the format is no longer simply that of the printed book, hypertext links give users an easy way

²⁰ Ibid., 9-10.

²¹ Ibid., 12.

of handling annotations and references, and publication can happen immediately and in a piecemeal fashion as things become ready and are amended and updated – just to mention a few benefits seen from the producer’s perspective. When it furthermore became possible, in the early 1990s, to add multimedia information in the form of images, audio, and video, other and more theoretical areas of interest in humanities computing came to the fore. One such interest is the digitization of books and other kinds of cultural heritage, not only for academic users, but also for the general public. As a result, writes Hockey,

Electronic resources became objects of study in themselves and were subjected to analysis by a new group of scholars, some of whom had little experience of the technical aspects of the resources. Hypertext in particular attracted a good many theorists. This helped to broaden the range of interest in, and discussion about, humanities computing but it also perhaps contributed to misapprehensions about what is actually involved in building and using such a resource. Problems with **the two cultures** emerged again, with one that was actually doing it and another that preferred talking about doing it.²² (my emphasis)

From humanities computing to DH

What Hockey was getting at is the tension between scholars who use and develop digital technologies in their pursuit of traditional humanities objects (a technologically anchored and tool-based approach) and those who do it the other way around, as it were – those who ask traditional kinds of humanities-oriented questions about digital objects and computing technologies themselves (a cultural or media studies-oriented approach). This tension is a result of the (discursive) shift that has taken place from ‘humanities computing’ to DH – a shift, one senses, that Hockey is not altogether pleased with. As Kathleen Fitzpatrick (who is a professor of media studies) sees it, this is but an “updated version of the theory-practice divide that has long existed in other quarters of the humanities,” and there are productive ways of bridging it. Such ways do not necessarily include welcoming into the fold of DH everything within humanities scholarship that has a digital element.

²² Ibid., 16.

There are scholars who, while being preoccupied with digital material of one sort or another, cannot be said to work directly within the traditions and assumptions of DH. The debates about who does and who does not belong within the borders of DH as a discipline are themselves fruitful, though:

The state of things in digital humanities today rests in that creative tension, between those who've been in the field for a long time and those who are coming to it today, between disciplinarity and interdisciplinarity, between making and interpreting, between the field's history and its future. Scholarly work across the humanities, as in all academic fields, is increasingly being done digitally. The particular contribution of the digital humanities, however, lies in its exploration of the difference that the digital can make to the kinds of work that we do, as well as to the ways that we communicate with one another.²³

On this basis, Fitzpatrick offers a (comparatively) clear and useful definition of DH as "a nexus of fields within which scholars use computing technologies to investigate the kinds of questions that are traditional to the humanities..."²⁴

DH as a visionary discourse

While Fitzpatrick's definition of and vision for DH is considerably broader than the one employed when the field was still called humanities computing and had an archives-and-digitization-focused flavour, it is not broad enough to satisfy some of the visionaries on the contemporary DH scene. Writing "at the end of 2010, at a contemporary moment when many feel that the Humanities are under threat," Patrik Svensson is one such visionary for whom DH may serve as nothing less than a means to advocate and rethink the humanities.²⁵ "Unlike many other fields and constellations in the humanities, the digital humanities is intimately associated with a fairly pronounced and far-reaching visionary discourse and transformative sentiment," Svensson writes.²⁶ He points to a number of reasons for this visionary discourse. The first of these is the institutional status of DH. The history

²³ Fitzpatrick, „The Humanities, Done Digitally.“

²⁴ Ibid.

²⁵ Patrik Svensson, „Envisioning the Digital Humanities,“ the fourth and last article in a series of articles that broadly explore DH – to be published in *Digital Humanities Quarterly* in 2012 and quoted here with the kind permission of the author.

²⁶ Ibid., 2 – this and the following page references to Svensson's article refer to a print-out (and not the published) version of the article.

of the field, as we saw above, goes back to the late 1940s, but as we also saw, the vote is still out on how to define the borders of DH as a discipline, and this prompts thinking about its future, Svensson argues. Much more heterogenous than before, what some perceive as its core approaches and methods are continuously challenged, and this adds to the sense of a field that is dynamic and ever-changing.

Second, though associated more with certain disciplines within the humanities than others, DH potentially operates across all of the disciplines of the humanities. It is truly interdisciplinary and has an actual or presumed humanities-wide engagement which "gives the digital humanities more reach than most regular departments, disciplines and centers, and arguably both an interest and a mandate to be invested in the future of the humanities at large (something like humanities centers)."²⁷ In addition, DH lends itself well to collective efforts of both a national and an international kind. This is a big advantage when it comes to applying for funding, for example. Projects such as the Danish initiative DigHumLab, mentioned above, which is part of the EU supported DARIAH (Digital Research Infrastructure for the Arts and Humanities), is a case in point. It is as truly interdisciplinary and its impact is arguably as potentially global as that of any large interdisciplinary project undertaken by a science or engineering team, and this makes it more interesting for funding agencies. This cross-sectional potential may lead, Svensson speculates, "to the digital humanities in a sense representing the humanities in relation to other areas of research and development such as science and engineering, which in turn helps create interest for the field outside of the humanities, and contributes to the sense of digital humanities as representing or manifesting the humanities. In a sense, the digital humanities can thus come to serve as a relatively

²⁷ Ibid., 5.

‘understandable’ and interpretable part of the humanities through its perceived or projected engagement with technology, often large data sets, laboratory environments, etc.’²⁸

What more than anything else lends DH its visionary quality, however, is its association with technology and the digital more generally. Svensson is not the first to emphasize the link between visionary thinking and technological development; many scholars before him have attempted to draw our attention to the fact that human beings have always accumulated technology because it increases our opportunities, individually as well as collectively. For some, this even imposes a moral duty on us to further technological development because we thereby increase the options and opportunities for people around the world.²⁹ This, as we shall see, was one of the messages that C.P. Snow tried to get across in his famous 1959 lecture on the Two Cultures. By relating this line of thinking to work going on within the humanities Svensson succeeds in making it relevant to humanities scholars in a new and interesting way.

Key words here are urgency and change – the need for rethinking and pushing against the boundaries of existing/established traditions and structures. Because most of the work done within DH is collaborative and project-based, moreover, and its concrete outcome often takes the form of digital publications which do not fit easily into existing patterns of rewards and support within the academy, there is a feeling in the DH community that changes are needed in the humanities to accommodate DH work. When we add to this the sense that many humanities scholars have of fighting a never-ending battle for funding, recognition and the place of the humanities within higher education, it is easy to understand how DH could become “a platform or means for rethinking the

²⁸ Ibid., 5-6.

²⁹ See e.g. Kevin Kelly, *What Technology Wants* (New York: Viking, Penguin Books, 2010).

humanities and higher education, and a way of channeling transformative sentiment that often goes far beyond the digital humanities proper.”³⁰

Two examples of visionary DH statements

As the UCLA authors behind *The Digital Humanities Manifesto 2.0* (which was preceded by a 1.0 release that prompted commentary later used for the redrafting) put it, DH does have “a utopian core”; not only because it has developed out of various counterculture movements of the 1960s and 70s, but also because the digital is the realm of open source and open resources.³¹ DH projects allow for research which is very different from the scholarly endeavours of the past; they are *communal* efforts, made up of contributions from a large community of experts. Attempting to describe what is going on with DH, the authors behind *The Digital Humanities Manifesto 2.0* phrase it in this way: “Digital humanities = Big Humanities = **Generative Humanities**... = **Co-creation**. Because of the complexity of Big Humanities projects, teamwork, specialized roles within teams, and ‘production’ standards that imply specialization become defining features of the digital turn in the human sciences. Large scale, distributed models of scholarship represent one of the transformative features of the Digital Humanities.”³²

Admitting that digital humanities at this point is not so much a unified field as “an array of convergent practices... that must shape a future in which the medium-specific features of digital technologies become its core and in which print is absorbed into new hybrid modes of communication,” the authors behind the *Digital Humanities Manifesto 2.0* may well rename their

³⁰ Svensson, „Envisioning the Digital Humanities,“ 7.

³¹ One good example is the project, Papers of Sir Isaac Newton, at the Cambridge University Library where manuscripts are freely available under a creative commons licence - <http://www.lib.cam.ac.uk/deptserv/manuscripts/newton.html>.

³² *Digital Humanities Manifesto 2.0*.

manifesto once they find a better label or phrase. They do not like the connotations of ‘digital humanities’ – that the humanities are simply being led or being modified by the technological/digital – and strongly stress that theirs is a vision “of a world of fusions and frictions, in which the development and deployment of technologies, and the sorts of research questions, demands, and imaginative work that characterize the arts and Humanities merge.” The initiative, that is, must come from within and not from outside the humanities.

According to the authors of the manifesto, DH is anchored in *making*, moreover – making in the poetic and creative sense (poiesis), but also in the more practical sense of design carried out in practice. This may be the reason why the manifesto points to *curation* – the scholar as curator and the curator as scholar – as central to the future of the humanities. This not only increases the importance of museums, libraries and archives; it also implies custodial responsibilities for cultural heritage, past and present. More generally, “curation means making arguments through objects as well as words, images, and sounds.” This wish to broaden our horizons beyond the strictly textual, is no news to historians, of course. As the Director of the British Museum, Neil MacGregor puts it in the introduction to his attempt to tell and then later write *A History of the World in 100 Objects* (2010):

If you want to tell the history of the whole world, a history that does not unduly privilege one part of humanity, you cannot do it through texts alone, because only some of the world has ever had texts, while most of the world, for most of the time, has not. Writing is one of humanity’s later achievements... In addition... it is, as we know, the victors who write the history, especially when only the victors know how to write...³³

Emphasizing design, multimediality and the experiential; preferring process to finished product; and “throwing down the gauntlet” to both Wikipedia (for representing a global, multilingual authorship and editorial collective) and Google (for aspiring to become “a modern-day Library of Alexandria and Oracle of Delphi”), the *Digital Humanities Manifesto 2.0* sees works of art as no longer authorial, but as encompassing “the work of master printers, typographers, and layout artists who

³³ Neil MacGregor, *A History of the World in 100 Objects* (London: The British Museum/Allen Lane, 2010), xvi.

transformed standards and practices.” Again, we are in the world of the truly communal in which it becomes very difficult, and not always very desirable, to hold on to notions of individual, autonomous voices.

Another far-reaching attempt to use the digital as a means of renegotiating the humanities and to rely on digital networks to further truly interdisciplinary work is HASTAC. ‘HASTAC / “haystack” / noun’ or the Humanities, Arts, Science, and Technology Advanced Collaboratory describes itself as,

a network of individuals and institutions inspired by the possibilities that new technologies offer us for shaping how we learn, teach, communicate, create, and organize our local and global communities. We are motivated by the conviction that the digital era provides rich opportunities for informal and formal learning and for collaborative, networked research that extends across traditional disciplines, across the boundaries of academe and community, across the **“two cultures”** of humanism and technology, across the divide of thinking versus making, and across social strata and national borders.³⁴ (my emphasis)

HASTAC community members include academics or others affiliated with universities, but also interested others such as public intellectuals, artists, citizen journalists, and educators “who use the potential of the Internet and mobile technologies for new forms of communication.”³⁵ The idea is to provide a forum for, and thereby further, the interconnected and interactive global nature of knowledge today – a forum that will blur sharp distinctions between research, education and other activities and that will extend DH beyond the humanities themselves to industry, cultural institutions and the art world.

The ultimate vision, though, is finding a way of bridging the ‘two cultures’ – defined here as not only those of the humanities and the sciences/technology, but also those of theory versus practice. We have already seen the latter mentioned in relation to the discursive shift from humanities computing to DH; what is interesting about the HASTAC statement is the way in which it also

³⁴ HASTAC – available at <http://hastac.org/about-hastac> (last accessed on November 15, 2011).

³⁵ Ibid.

includes a vision of bridging social divisions as well as national borders digitally. All of these elements were present in the ‘original’ debate on ‘the two cultures’ – the one started by C.P. Snow in a lecture at the University of Cambridge in 1959 and followed up by another Cambridge lecture in 1962 by F.R. Leavis.³⁶

Sir Charles Percy Snow did a Ph.D. in Chemistry at the University of Cambridge, but it was as a novelist and government official that he became a well-known figure to the English public. Between 1940 and 1970, he published eleven novels that became known collectively as *Strangers and Brothers*. These novels were very successful, they sold widely and were translated into many different languages. Frank Raymond Leavis was less of a public figure. Within the academic community, though, he was recognized as one of the most influential figures in twentieth-century English literary criticism. He did his Ph.D. in English at the University of Cambridge where he taught for many years and was well known for his decisive and often provocative, and idiosyncratic, judgements.

The Two Cultures and the Scientific Revolution was the Sir Robert Rede Lecture at Cambridge of 1959. In it Snow brought to public attention what he considered to be a dangerous divide between the ethos and practices of the sciences and those of the old humanities (especially Latin and Greek). The British educational system had over-rewarded the latter at the expense of scientific and engineering education with the result that people in politics, administration, and industry were ill-equipped to manage the modern scientific world.

³⁶ As Stefan Collini has shown, „as a cultural anxiety, concern about the divide between the ‚two cultures’ essentially dates from the nineteenth century, and the modern form of this anxiety would have been barely intelligible in earlier periods“ (Stefan Collini, „Introduction,“ *C.P.Snow The Two Cultures* (Cambridge: Cambridge University Press, 1998), ix). In the British context, there was a prequel to the Leavis/Snow controversy in the 1880s which involved Matthew Arnold and T.H Huxley. When I talk about the Leavis/Snow controversy as the ‘original’ one, it is therefore not quite correct. However, it is precisely the Leavis/Snow controversy that is referred to in contemporary debates on DH; for contemporary debaters, this is the ‘original’ one.

Snow's lecture started a debate about the relative importance for British culture of 'the two cultures,' the arts and sciences – a debate to which Leavis contributed with his Richmond Lecture, entitled "*Two Cultures? The Significance of C.P. Snow*" and delivered in Downing College, Cambridge, in February 1962. Attempting, first, to undermine Snow's authority by speaking of the vulgarity and banality of his literary style, Leavis then advanced the argument that an antidote was needed in a society like the present to the advances not only of science and technology, but also of the cheapening force of modern mass culture. Such an antidote was 'great' literature, the living repository of all that is vital and important in the human experience.³⁷

II. The 'Two Cultures' debate – or the 'Leavis/Snow controversy'

"A lively young person of advanced tastes would surely say that if ever two men were committed to England, Home, and Duty, they are Leavis and Snow," wrote Lionel Trilling, one of the leading American literary and cultural critics of the time, in "A Comment on the Leavis-Snow Controversy."³⁸ Leavis and Snow did indeed have a lot in common. Their social backgrounds were similar. Not belonging to the traditional social elites, they were both keen supporters of meritocratic access to the educational system. And yet, they clashed in a very fundamental way when it came to the contents of what young English men and women ought to learn within this educational system.

Snow's lecture got an immediate response, both positive and negative, and Snow later thought that this must be because he touched on something which was already 'in the air':

³⁷ There was a similar debate going on at the University of Oxford during the same time. Here, Isaiah Berlin took the leading part in building a graduate college, Wolfson College, which would promote the powerful scientific and technological developments of the time. See Henry Hardy, Kei Hiruta and Jennifer Holmes (eds.), *Isaiah Berlin & Wolfson College* (Oxford: Wolfson College, 2009).

³⁸ Lionel Trilling, "A Comment on the Leavis-Snow Controversy," *Commentary*, 1962 – quoted in Collini, "Introduction," *C.P. Snow The Two Cultures*, xxxix-xl.

It was clear that many people had been thinking on this assembly of topics. The ideas were in the air... In 1956 and 1957 I myself wrote two pieces which, though shorter than the Rede Lecture, contained much of its substance. Yet none of us got much response. Two years later the time was right; and any one of us could have produced a hubbub. It is a reminder of the mysterious operation of what, in the nineteenth century, was reverently referred to as the *Zeitgeist*.³⁹

Apart from the fact that these ideas were not all that original to him, what could be inferred from this, Snow claimed, was that “there must be something in them.”⁴⁰ Much has since been said and written about Snow’s and, later on, Leavis’ lecture, which was given as a direct response to Snow’s. Marking the 50th anniversary of Snow’s lecture, Guy Ortolano argues in *The Two Cultures: Science, Literature and Cultural Politics in Postwar Britain* (2009), for example, that “it is the ‘two cultures’ controversy, not the *two cultures*, that must be the object of study in order to apprehend this episode’s meaning and significance.”⁴¹ What Ortolano offers with his wonderful and very rich book is a cultural history of this controversy. By examining its origins, content, and context, he interprets the dispute, not so much as a disciplinary one concerning the arts and the sciences, but as an ideological one that relates to several contentious issues in postwar British history: the expansion of the universities, the development of social history, anxieties about national decline, debates about the former empire, and the meaning of the 1960s.⁴²

In what follows, I will not attempt to cover all these aspects of the two lectures and the responses they evoked. A cultural historian myself, I do realize the importance of historical context – of situating a particular episode within its relevant social, political, and cultural context. Snow and Leavis obviously reacted to contemporary issues which they considered pressing and consequential – and to each other as Cambridge colleagues and contemporaries. However, as references in the present DH context to the two cultures debate most often do not relate to the historical context in

³⁹ C.P. Snow, „The Two Cultures: A Second Look“ (1963), in Snow, *The Two Cultures*, 54-55.

⁴⁰ *Ibid.*, 55.

⁴¹ Guy Ortolano, *The Two Cultures Controversy: Science, Literature and Cultural Politics in Postwar Britain* (Cambridge & N.Y.: Cambridge University Press, 2009), 9.

⁴² *Ibid.*, 1.

which the original Leavis/Snow controversy took place, but instead concern the (in some ways more timeless) disciplinary argument – the relationship between the arts and the sciences – this is the one I shall concentrate on here.

Snow's lecture

“Before I wrote the lecture I thought of calling it ‘The Rich and the Poor’, and I rather wish that I hadn’t changed my mind,” Snow wrote in 1963, in “The Two Cultures: A Second Look,” his very interesting response to the debate to which his Rede Lecture had given rise. This is what he had intended to be the most central piece of his argument – “that one musn’t despise the elemental needs, when one has been granted them and others have not. To do so is not to display one’s superior spirituality. It is simply to be inhuman, or more exactly anti-human.”⁴³

It is the issue of morality that is at stake here. In his reply to Snow’s Rede Lecture, Leavis had argued that Snow’s sense of morality was an external or social-science oriented one only – one that rested on ‘social hope’ for humankind in general and had nothing to do with ‘(superior) spirituality’, with the ethical norms of each individual, thinking and feeling, human being. It was man’s social role much more than his inner thoughts that interested Snow. While Leavis was right in one sense – Snow did think it a duty for every scientist to use his/her knowledge to better the conditions of his/her fellow human beings – he did miss the point in another sense, though. As Snow saw it, a (good) scientist just as profoundly pronounces on and is as critical of life as is a (good) author of fiction. Reflecting back on the significance of Leavis in 1995, Raymond Tallis puts it very well:

[Lionel Trilling, in explaining Leavis’s response to Snow] lets slip...the assumption, widespread among non-scientists, that science is not also a criticism of life – and at the deepest level. It is assumed that science is part of the life that has to be criticised by the educated, part of the object that the educated mind may inspect (from a great distance), and not part of the mind itself or crucial to its education... The assumption that science is not criticism of life is, of course, untenable. From Copernicus onwards, the findings and

⁴³ Snow, „The Two Cultures: A Second Look“, 76.

speculations of the scientists have been a continuous threat to collective, unreflective beliefs about the nature and purpose of human life, the position of man in the order of things and the origin and destination of the universe; in short a ‘criticism of life’ in the best and deepest sense.⁴⁴

In his Rede Lecture, Snow had talked about how annoyed he was at the limited notion of *Bildung* (i.e. education) adhered to by most humanities scholars. These scholars never doubted that any well-educated person had to have at least a basic knowledge of the works of great writers; yet, when asked to describe the Second Law of Thermodynamics – “about the scientific equivalent of: *Have you read a work of Shakespeare’s?*”⁴⁵ – most of them didn’t have a clue and clearly didn’t consider such knowledge important for them to have. Leavis had commented on the somewhat patronising tone Snow had adopted vis-à-vis humanities scholars and Snow, admitting in his Second Look article, that he may not have used the best example, instead offered molecular biology as a subject that everyone – including humanities scholars – ought to be familiar with. Involving fewer conceptual difficulties than, and not quite reaching as deep as, thermodynamics, molecular biology is, Snow wrote, “a branch of science...likely to affect the way in which *men think of themselves* more profoundly than any scientific advance since Darwin’s – and probably more so than Darwin’s.”⁴⁶

Major scientific breakthroughs such as the ones currently being made in molecular biology – and the example of Crick and Watson discovering the structure of DNA and teaching us about our genetic inheritance comes immediately to mind – are “bound to touch both our hopes and our resignations” in a fundamental way.⁴⁷ What is happening within molecular biology and other scientific disciplines very obviously concerns human life – but not just in the immediate, material

⁴⁴ Raymond Tallis, „The Eunuch at the Orgy: Reflections on the Significance of F.R. Leavis,“ in Frank Furedi, Roger Kimball, Raymond Tallis & Robert Whelan, *From Two Cultures To No Culture: C.P.Snow’s , ,Two Cultures’ Lecture Fifty Years On* (Civitas: Institute for the Study of Civil Society London, Registered Charity No. 1085494, 2009), 47-48.

⁴⁵ C.P. Snow, „The Two Cultures. The Rede Lecture, 1959,“ in *C.P.Snow The Two Cultures* (Cambridge: Cambridge University Press, 1998), 15.

⁴⁶ Snow, „The Two Cultures: A Second Look“, 74.

⁴⁷ *Ibid.*, 75.

sense. Snow argued that it touches just as much, epistemologically and existentially speaking, on “the livingness of the deepest vital instinct,” the “supremely human,”⁴⁸ as does the kind of literary endeavour that Leavis saw as the core of the humanities, Snow argued.

This alone, he thought, would be “sufficient reason why the next generation should learn about it.” But in addition, advances such as the ones made by Crick and Watson have made us realize that “applied science has made it possible to remove unnecessary suffering from a billion individual human lives.”⁴⁹ This is where Snow approached that other side of the moral in relation to science and scientific knowledge – the one that Leavis had quite rightly picked up on. I’ll come back to Leavis’s argument in more detail shortly; what is important to emphasize here is how central the sense of moral duty was for Snow’s arguments on education, on the industrial and scientific revolution(s) and on closing the gap between the two cultures. In the foreseeable future, he wrote in “A Second Look,” “Renaissance Man is not possible. But we can do something. The chief means open to us is education – education mainly in primary and secondary schools, but also in colleges and universities. There is no excuse for letting another generation be as vastly ignorant, or as devoid of understanding and sympathy, as we are ourselves.”⁵⁰

To the extent that we “can do something”, that is, we have a moral obligation to do so. This is the case, Snow thought, both in a practical and in a more abstract sense. The former had to do with educating many more scientists and subsequently sending them out into the world, beyond the wealthy West, where their skills could be utilized to close the gap between the rich and the poor. And the latter concerned the importance of broadening the notion of *Bildung* in the educational system to also include science and to further the understanding between members of the humanities

⁴⁸ F.R. Leavis, *Two Cultures? The Significance of C.P. Snow*. The Richmond Lecture, 1962 (London: Chatto & Windus. 1962), 27.

⁴⁹ Snow, „The Two Cultures: A Second Look“, 74.

⁵⁰ Snow, „The Two Cultures: A Second Look“, 61.

and the sciences – closing the gap between the two cultures, in other words. What, then, were the two cultures of which Snow spoke so interestingly in 1959? “I believe,” he started out by saying, that “the intellectual life of the whole of western society is increasingly being split into two polar groups.” And he continued:

Literary intellectuals at one pole – at the other scientists, and as the most representative, the physical scientists. Between the two a gulf of mutual incomprehension – sometimes (particularly among the young) hostility and dislike, but most of all lack of understanding. They have a curiously distorted image of each other... The non-scientists have a rooted impression that the scientists are shallowly optimistic, unaware of man’s condition. On the other hand, the scientists believe that the literary intellectuals are totally lacking in foresight, peculiarly unconcerned with their brother men, in a deep sense anti-intellectual, anxious to restrict both art and thought to the existential moment. And so on.⁵¹

The personification of the man of science was for Snow the chemist and physicist Ernest Rutherford who had been awarded the Nobel Prize in Chemistry in 1908. Not everyone looked kindly upon Rutherford, who was known to be rather loud, when he roared that “this is the heroic age of science! This is the Elizabethan age!” The thing was, though, Snow wrote, that “what is hard for literary intellectuals to understand, imaginatively or intellectually, is that he was absolutely right.”⁵² Leavis, as it would later turn out, was one of the literary intellectuals who found this hard to understand and who would castigate Snow for oversimplifying his arguments into ‘clichés to an unbearable extent. What Snow was trying to get at here was the optimistic way of thinking of scientists – “scientists have the future in their bones,” he said, and the response by “the traditional culture” was simply to wish that “the future did not exist.”⁵³ The scientific culture,⁵⁴ moreover, is characterized by a more rigorous and often higher conceptual level of arguing as well as a belief in progress, and when it

⁵¹ Snow, „The Two Cultures. The Rede Lecture,“ 4-5.

⁵² Ibid., 5, 11.

⁵³ Ibid., 5, 11.

⁵⁴ Leavis is not the only critic to have complained about the lack of precision on Snow’s part. What exactly did Snow mean when he talked about the „literary culture“ and the „traditional culture,“ for example – were they one and the same thing? On the notion of a scientific culture, Snow explained that what he had in mind was the anthropological meaning of „common attitudes, common standards and patterns of behaviour, common approaches and assumptions“ typically held by scientists (Snow, „The Two Cultures“, 9 – see also Snow, „The Two Cultures: A Second Look“, 64).

comes to the moral side of life, “there is a moral component right in the grain of science itself, and almost all scientists form their own judgments of the moral life.”⁵⁵

On the issue of the optimism of scientists, Snow explained, there is often a tendency to confuse matters somewhat – individual experience or the individual condition of man tends to be confused with the social experience or man’s social condition. Whereas the former does inevitably have a tragic element to it – each one of us is solitary, “each of us dies alone” and “that’s a fate against which we can’t struggle” – this is not necessarily the case with the latter. We can and should struggle against that which is not fate – that about which we *can* make a difference. When we see others around us starve or die – and this is, Snow argues, “in the crudest terms...the social condition” – it may be tempting to “sit back, complacent in one’s unique tragedy, and let the others go without a meal.” But this is surely wrong – this is not where our insights into man’s loneliness should lead us. Instead, we should *act*. And here, scientists are more inclined than are humanities scholars “to be impatient to see if something can be done: and inclined to think that it can be done, until it’s proved otherwise. That is their real optimism, and it’s an optimism that the rest of us badly need.”⁵⁶

By contrast, certain twentieth-century writers (and Snow here specifically mentioned Yeats, Pound, and Wyndham Lewis) have seemed to work in the opposite direction.⁵⁷ They have been not only “politically silly,” but also “politically wicked” – indeed, a scientist of distinction once asked Snow, “‘didn’t the influence of all they represent bring Auschwitz that much nearer?’” While finding this

⁵⁵ Snow, „The Two Cultures. The Rede Lecture,“ 12-13.

⁵⁶ *Ibid.*, 6-7.

⁵⁷ In his Second Look article, Snow called these writers ‘modernists’ or ‘moderns’ and added Laforgue, Henry James, Dujardin, Dorothy Richardson, T.S. Eliot, Hulme, Joyce, Lawrence, Sologub, Andrei Bely, Virginia Woolf, Gide, Musil, Kafka, Benn, Valery, Faulkner and Beckett to the list (Snow, „The Two Cultures: A Second Look“, 93). – See also John Carey’s criticism, in *The Intellectuals and the Masses: Pride and Prejudice Among the Literary Intelligentsia 1880-1939* (London: Faber and Faber, 1992) of the literary intelligentsia creating a class of literature which was impossible for the average reader to understand.

statement too strong, too facile, Snow did feel that “the honest answer was that there is, in fact, a connection, which literary persons were culpably slow to see, between some kinds of early twentieth-century art and the most imbecile expressions of anti-social feeling.”⁵⁸ Whereas most scientists “would see no reason why, just because the individual condition is tragic, so must the social condition be,”⁵⁹ modernist writers and intellectuals tended to turn matters upside down – to take “an optimistic view of one’s individual condition and a pessimistic view of the social one.”⁶⁰

Relying on a romantic notion of the artist as someone who is ideally unaffected by the changing conditions of society, these writers and intellectuals longed for the way things were before the industrial revolution. They positively refused to cope with both the industrial revolution and the scientific revolution that followed it⁶¹ and this was terrible, for in these revolutions lay, in Snow’s view, the best hope for bettering the conditions of all of mankind. “Industrialisation,” he wrote, “is the only hope of the poor.” And while he would certainly respect the rejection of industrialisation as a personal choice, he could not condone it if it included others who had not and in all probability would not make that choice for themselves:

It is all very well for one, as a personal choice, to reject industrialisation – do a modern Walden, if you like, and if you go without much food, see most of your children die in infancy, despise the comforts of literacy, accept twenty years off your own life, then I respect you for the strength of your aesthetic revulsion. But I don’t respect you in the slightest if, even passively, you try to impose the same choice on others who are not free to choose. In fact, we know what their choice would be. For, with singular unanimity, in any country where they have had the chance, the poor have walked off the land into the factories as fast as the factories could take them.⁶²

⁵⁸ Snow, „The Two Cultures. The Rede Lecture,“ 8.

⁵⁹ Ibid., 6.

⁶⁰ Snow, „The Two Cultures: A Second Look“, 96.

⁶¹ Snow defined the difference in this way: „Out of [the industrial revolution, which can be dated roughly from the middle of the eighteenth century to the early twentieth] grew another change, closely related to the first, but far more deeply scientific, far quicker, and probably far more prodigious in its result. This change comes from the application of real science to industry, no longer hit and miss, no longer the idea of odd ‚inventors‘, but the real stuff“ (Snow, „The Two Cultures. The Rede Lecture,“ 29).

⁶² Snow, „The Two Cultures. The Rede Lecture,“ 25-26.

In never really wanting to understand the dynamics of the most important transformation in society since the discovery of agriculture, these modernist writers and intellectuals were, Snow said, “natural Luddites.” There were many different reasons for the existence of the two cultures, but in his Rede Lecture he had chosen to concentrate on these Luddite attitudes. Although they were a problem that concerned the entire West, other countries – and here Snow mentioned both the U.S. and Russia – had been much better at bridging the gap between the two cultures. In the British context, he pointed to the early specialisation, dictated by Oxford and Cambridge scholarship examination concerns, and, in direct continuation of this, the pattern of training only a small elite as being particularly relevant. “If our ancestors had invested talent in the industrial revolution instead of the Indian Empire,” Snow dryly commented, “we might be more soundly based now. But they didn’t.”⁶³

To rectify this situation, money, time and energy now had to be invested in educating a large number of scientists, technicians as well as politicians and administrators who “know enough science to have a sense of what the scientists are talking about.” Scientific issues should be incorporated into the curriculum at all levels of the educational system, moreover, in order that the balance between humanities and natural science topics taught would change in favour of the latter. It wasn’t that scientists should no longer be taught humanities topics, but more that students of the humanities should be exposed to more science so as to counter whatever (natural) Luddite tendencies they might otherwise develop. And hopefully, in the end, a change of attitude vis-à-vis science and technology would then find its way into the arts and literature. “We have very little time,” Snow ended his Rede Lecture by dramatically declaring, “so isn’t it time we began?”⁶⁴

Leavis’s response

⁶³ Ibid., 39.

⁶⁴ Ibid., 38, 51.

Snow presented himself, in his Rede Lecture, as a scientist-by-day and a novelist-by-night – “by training I was a scientist: by vocation I was a writer.”⁶⁵ Over the years, his contact with both groups/cultures had alerted him to the problem that he intended to address in his lecture: the problem of the two cultures. His personal history wasn’t “the point now,” though; it was “just a piece of luck, if you like, that arose through coming from a poor home.”⁶⁶

This is about all Snow said in reference to his own background; yet Leavis took his comments to imply that he considered himself ideally placed to talk about both cultures:

The general nature of [Snow’s] position and his claim to authority are well known: there are the two uncommunicating and mutually indifferent cultures, there is the need to bring them together, and there is C.P. Snow, whose place in history is that he has them both, so that we have in him the paradigm of the desired and necessary union.⁶⁷

Leavis was known to his students and his colleagues as a ruthless and merciless critic. With his Richmond Lecture, however, he surpassed himself. Due to retire at the end of that same academic year, he had invested a lot of time and energy in his assessment of Snow’s by now three year old lecture,⁶⁸ and by the time that he was done it was quite clear that he considered his colleague a gigantic failure in every respect.

It is no wonder that Leavis’s Richmond Lecture is often seen as no more than an angry attack on Snow. I find it embarrassing to see one academic thrashing another so thoroughly – this is definitely not the way in which an intellectual argument ought to be presented. It is also such a shame; Leavis’s angry tone tends to cover up some of the real and important issues involved. Beneath all his venom, Leavis did express a concern with the assumptions of a civilization that furthered material/mass culture, a technocratic optimism and a journalistic, superficial way of writing at the

⁶⁵ Snow wrote eleven novels that were published between 1940 and 1974 and became known collectively as *Strangers and Brothers*.

⁶⁶ Snow, „The Two Cultures. The Rede Lecture,“ 1.

⁶⁷ Leavis, *Two Cultures? The Significance of C.P. Snow*, 12.

⁶⁸ Ortolano, *The Two Cultures Controversy: Science, Literature and Cultural Politics in Postwar Britain*, 94.

cost of great art, intellectual content and depth which is still pertinent today – and which comes up in discussions about whether there is too much ‘digital’ and too little ‘humanities’ in DH.

As Leavis saw it, it wasn’t just that Snow made himself an authority on the two cultures by ‘misusing’ his personal history, it was that he pretended to be an authority on anything at all. Snow’s was a “self-assured performance,” and this greatly annoyed Leavis – for “Snow is in fact portentously ignorant,” not only of history, but also of the nature of civilisation and of literature as well as of everything else on which he pronounced. In fact, said Leavis, “the judgment that I have to come out with is that not only is he not a genius; he is intellectually as undistinguished as it is possible to be.” And as for his reputation of being a famous novelist and sage, it was completely unfounded – Leavis wouldn’t even go so far as to call him a novelist: “Snow is, of course, a – no, I can’t say that; he isn’t: Snow thinks of himself as a novelist... as a novelist he doesn’t exist; he doesn’t begin to exist. He can’t be said to know what a novel is.”⁶⁹

Snow’s novels were lifeless – his dialogues fell flat, he told of rather than showed his characters to fall in love, the interests of his characters were completely banal, in short, “he is utterly without a glimmer of what creative literature is, or why it matters,” Leavis wrote. As a critic, moreover, Snow dealt in clichés. What did he mean, for example, when he said that scientists ‘have the future in their bones’ or that writers and intellectuals are ‘natural Luddites’? And why was it that Snow moved back and forth between ‘the literary culture’ and ‘the traditional culture’ without ever telling us whether these are synonymous terms, let alone defining what they mean? Snow’s was the “world of the *New Statesman*, the *Guardian* and the *Sunday Papers*” – and emphatically not the world of sophisticated academic thought, Leavis argued.⁷⁰

⁶⁹ Leavis, *Two Cultures? The Significance of C.P. Snow*, 9, 10, 13.

⁷⁰ *Ibid.*, 18, 15-18.

So why even bother to deal with Snow? Well, Leavis explained, the thing about Snow was that he was “a portent of our civilisation,” frightening “in his capacity of representative phenomenon.”⁷¹ Herein lay Snow’s significance – he enjoyed the status of famous author and distinguished intellectual, his Rede Lecture was studied in sixth form and was widely referred to in countries beyond the UK too, all of which reflected the state of the civilisation which produced him. In and of himself, Snow didn’t matter to Leavis – it is what he represented that was the problem. With all his clichés, repetitions and sentimental banalities, Snow was too “unequivocal.” He failed to question, to probe further, but simply “takes over inertly – takes over as a self-evident simple clarity – the characteristic and disastrous confusion of the civilisation he is offering to instruct.”⁷²

What Snow lacked was depth – depth in the sense of questioning the received truths of the *Zeitgeist*, material but especially spiritual:

But life in the civilisation of an age for which such creative questioning is not done and is not influential on general sensibility tends characteristically to lack a dimension: it tends to have no depth – no depth against which it doesn’t tacitly protect itself by the habit of unawareness (so Snow enjoins us to do our living in the dimension of ‘social hope’).⁷³

In talking about ‘social hope’ and preaching a way of salvation that entailed ‘welfare’ for all in terms of material standards of living, advantages of technology and scientific hygiene, Snow displayed a “crass Wellsianism”⁷⁴ or “Technologico-Benthamite” view of the world.⁷⁵ Snow’s world was one, as Leavis spelled it out,

in which, even at the level of the intellectual weeklies, ‘standard of living’ is an ultimate criterion, its raising an ultimate aim, a matter of wages and salaries and what you can buy with them, reduced hours of work, and the technological resources that make your increasing leisure worth having, so that productivity – the supremely important thing – must be kept on the rise, at whatever cost to protesting conservative habit.⁷⁶

⁷¹ Ibid., 14, 16,

⁷² Ibid., 19.

⁷³ Ibid., 23.

⁷⁴ Ibid., 23.

⁷⁵ Ian MacKillop, *F.R. Leavis, A Life in Criticism* (London: Allen Lane, the Penguin Press, 1995), 321.

⁷⁶ Leavis, *Two Cultures? The Significance of C.P. Snow*, 25.

And what more than anything invoked the total vision of Snow's 'social hope,' so "unintoxicating to many of us," was "the vision of our imminent tomorrow in today's America: the energy, the triumphant technology, the productivity, the high standard of living and the life-improvement – the human emptiness; emptiness and boredom craving alcohol – of one kind of another."⁷⁷ Here Leavis was joining the ranks, interestingly enough, of many members of the European intelligentsia for whom American popular or mass culture has always been looked upon with great disdain and suspicion. Whether coming from the left or the right, the criticism of the United States has most often centered on American (popular) culture as a mass or lowbrow culture whose popularity would result in a levelling down of European fine or highbrow culture.

This is not the place to go into the transatlantic tensions underlying many European debates on culture, in Snow's and Leavis's day as well as today; suffice it to say, that these tensions surface at times in some of the current DH debates. "The Internet," John Naughton reminded us in 2000,

Is as American as apple pie – everyone knows that, right down to the technophobe who sneers contemptuously at the idea of people 'surfing the Net'. And although the network has been around for a long time now, it's still the case that the values which dominate it are American ones.⁷⁸

In much criticism of what the internet does to people today, as we shall see, it is precisely this criticism of dumbing down, of making people more shallow that we hear.

The dimension that Leavis most of all found lacking in Snow was the individual, the human one. Though all human beings share certain common features – hunger and thirst, for example, and the fact that we all have eyes, noses, legs and arms – "individual lives cannot be aggregated or equated or dealt with quantitatively in any way."⁷⁹ Spiritually, we are all different and it counts – or ought to

⁷⁷ Ibid., 26.

⁷⁸ John Naughton, *A Brief History of the Future: Origins of the Internet* (London: Phoenix, 2000), 118.

⁷⁹ Ibid., 20.

count – how each individual human being thinks and feels. Snow’s ‘social hope’ didn’t catch that inward quality of individual life, that kind of existential thought and experience which might ultimately lead to something as old-fashioned as wisdom. At one level, what was at stake was what the Germans would call *Weltschmerz* – the tragic feeling and creative probing into the big questions about life and death which may at its best produce great art and literature:

In coming to terms with great literature we discover what at bottom we really believe. What for – what ultimately for? What do men live by – the questions work and tell at what I can only call a religious depth of thought and feeling.⁸⁰

At another level, the issue, as Leavis saw it, was the pace of life that modern science and technology seemed to result in. Snow had kept stressing, in his Rede Lecture, the urgency of his concerns, the speed with which today turns into tomorrow – “we have very little time. So little I dare not guess at it”⁸¹ – but he hadn’t really paused to consider the deeper implications of this. Brakes must be applied sometimes, Leavis thought. It wasn’t that Snow was wrong in advocating improvements in scientific education and in living standards for everyone; in was more that “such concern is not enough – disastrously not enough.” Things were changing so rapidly, and critical reflection was urgently needed to help make sense of it all – and to prevent the worst scientific blunders which, in the atomic day and age, could have fatal results. Moreover, important ethical issues could well be at stake – issues that perhaps scientists themselves wouldn’t be aware of:

The advance of science and technology means a human future of change so rapid and of such kinds, of tests and challenges so unprecedented, of decisions and possible non-decisions so momentous and insidious in their consequences, that mankind – this is surely clear – will need to be in full intelligent possession of its full humanity (and ‘possession’ here means, not confident ownership of that which belongs to *us* – our property, but a basic living deference towards that to which, opening as it does into the unknown and itself unmeasurable, we know we belong). I haven’t chosen to say that mankind will need all its tradition wisdom; that might suggest a kind of conservatism that, so far as I am concerned, is the enemy. What we need, and shall continue to need not less, is something with the livingness of the deepest vital instinct; as intelligence, a power – rooted, strong in experience, and supremely human – of

⁸⁰ Ibid., 23.

⁸¹ Snow, „The Two Cultures. The Rede Lecture,“ 51.

creative response to the new challenges of time; something that is alien to either of Snow's cultures.⁸²

Intellectual depth and complexity along with a both critical and creative response to change – or *life*, an essential concept to Leavis because it was right at the core of what it means to be human – this is what humanities scholars such as Leavis himself could help preserve. Without “the creation of the human world, including language,” he argued, “the triumphant erection of the scientific edifice would not have been possible”. The word ‘language’ is crucial here. To Leavis, language was not just a means of communication; it was through language that meaning was created – meaning which was then transmitted through literature as a “cultural community or consciousness.” The place where this cultural consciousness might be sustained was the university, and because language was central to thought, and thought, past as well as present, would be transmitted via literature, the center of the university ought to be “a vital English School,” Leavis maintained:

Like Snow I look to the university. Unlike Snow, I am concerned to make it really a university, something (that is) more than a collocation of specialist departments – to make it a centre of human consciousness: perception, knowledge, judgment and responsibility. And perhaps I have sufficiently indicated on what lines I would justify my seeing the centre of a university in a vital English School.⁸³

In such a university, Leavis ended the Richmond Lecture 1962, “the attention I have paid to a Snow would be unnecessary.” ‘A’ Snow – Leavis finished as he had begun, by reducing Snow to a mere sign of the times. Along the way he had anxiously claimed that he was not himself a Luddite, but that he would be dismissed by Snow and his cohort as being one, the moment he pointed to the complexity of current technical and intellectual developments. Any criticism voiced would be seen as inevitably ‘highbrow’ – a negative term wielded against anyone who attempted to work toward maintaining standards:

The upshot is that if you insist on the need for any other kind of concern, entailing forethought, action and provision, about the human future – any other kind of misgiving –

⁸² Leavis, *Two Cultures? The Significance of C.P. Snow*, 25, 26-27.

⁸³ *Ibid.*, 27, 28, 29. See also Ortolano, *The Two Cultures Controversy*, 72-75, 96.

than that which talks in terms of productivity, material standards of living, hygienic and technological progress, then you are a Luddite.⁸⁴

Just as Snow personified for Leavis everything that was currently wrong, so Leavis was for Snow in the end nothing but another Luddite. Today, the name of each is very much associated with the two cultures debate of which they were the main protagonists. As we find ourselves in the middle of another technological revolution – this time a digital one – we are once more very concerned with what the implications will be for our research and our way of thinking and writing. Especially humanities scholars such as myself wonder what the future of DH – the discipline where the technological quite literally overlaps with the humanities – will hold in store for us. To what extent will the technophiles, already as fully converted to the digital cause as Snow was to the scientific revolution, carry the day – and on what terms? And to what extent will those of us who care about the humanities be allowed to fret about the present state and future of our disciplines in the same way that Leavis wondered about what can and should be done, without being considered ‘highbrow,’ elitist snobs?

Whatever side each humanities scholar will be on, I just hope that we will all remember to take each other seriously and to listen without ridiculing and denigrating – that much, at least, we should be able to take away with us from the ‘Leavis/Snow controversy.’

III. Summary and concluding remarks: Contemporary echoes of the two cultures debate

What runs through the lectures of both Snow and Leavis as a leitmotif is the sense that after the Renaissance, there had been a split between reason and emotion, between science and the humanities. Leavis had been much influenced by the thinking of T.S. Eliot, for whom Donne and

⁸⁴ Ibid., 30, 19.

the other Metaphysicals had been the last to hold together, in one unified linguistic field, reason and emotion⁸⁵ and for Snow, as we saw, “Renaissance Man is not possible.” While Leavis tended to view this in a more pessimistic light than did Snow – whose remark was immediately followed by the more positive assertion, “but we can do something” – he did feel strongly about wanting to create a university “centre of human consciousness.” Besides, all the work and effort that he put into his response to Snow’s Rede Lecture does seem to suggest that he too thought something could (and should) be done.

The image or metaphor of the Renaissance tends to crop up again today in various contexts. In the autumn of 2011, the National Gallery in London is doing an exhibition on Leonardo da Vinci, “Leonardo: Painter at the Court of Milan,” which focuses on his formative years as a court artist in the 1480s and 1490s. The exhibition has become something of a blockbuster art show, confirming da Vinci as a Renaissance rock star.⁸⁶ Not to be outdone, the Germanisches Nationalmuseum in Nuremberg, Germany has planned an exhibition of the early Albrecht Dürer which will open in the spring of 2012. This will be the “largest Dürer exhibition to be held in Germany in 40 years,” and it will provide new perspectives on the work and influence of the artist who, having travelled in Italy, took the Renaissance with him to Northern Europe.⁸⁷

Releasing its first annual report in 2009, highlighting the need for a new spirit to be instilled in European research by 2030, moreover, the European Research Area Board (ERAB) identified six broad policy areas where a ‘new Renaissance’ can be realised. Members of the board noted that, above all, trust needs to be reinstated between science and society. In his accompanying foreword to

⁸⁵ Stuart Moulthrop, „After the Last Generation: Rethinking Scholarship in the Days of Serious Play,“ paper given at the 6th Digital Arts & Culture Conference, Information Technology, Copenhagen 2005 – available at <http://iat.ubalt.edu/moulthrop/essays/> (last accessed on November 24, 2011).

⁸⁶ This phrase is suggested by Jill Lawless in „Leonardo Da Vinci The Star Of Major London Show,“ *The Huffington Post*, November 8, 2011 – available at http://www.huffingtonpost.com/2011/11/08/leonardo-da-vinci-the-sta_0_n_1082838.html (last accessed on November 24, 2011).

⁸⁷ “The Early Dürer,” Germanisches Nationalmuseum - available at <http://der-fruehe-duerer.gnm.de/index.php?id=4&L=1> (last accessed on November 25, 2011).

the report, EU Commissioner for Science and Research Janez Potocnik explains that, “this holistic thinking and approach epitomised the first ‘Renaissance’, where scholars and artists moved relatively freely around Europe among the centres of learning and culture. While this privilege was the domain of a few at that time, it should be our ambition, in the new ‘Renaissance’, that this should be the expectation of all citizens, especially in the field of research and innovation.”⁸⁸

Will such a second Renaissance be possible? If it were up to the more visionary members of DH, the answer would be a resounding ‘yes.’ For these scholars, the ultimate vision is precisely one of combining reason and emotion, science and the humanities – and practice and theory. Preferably in Big Humanities centers not all that different, in fact, from Leavis’s university “centre of human consciousness.” “The ‘two cultures’ of literature and science [may well] seem as distinct today as when Snow described them in 1959,” Stuart Moulthrop, a DH scholar, wrote in 2005,⁸⁹ but the concept of the ‘universal without totality,’ borrowed from P. Lévy, may offer a promising way to unify theory and practice. What Lévy proposes as the primary example of a universal without totality is the Internet. And under the aspect of practice or know-how, Moulthrop suggests, still borrowing from Lévy, the Internet can help us rescue not only totality (claims to absolute truth) but also universality (discourses or methods available to all). Postmodernist writers have done their best to question both with the result that the relationship between the humanities and the natural sciences has never been worse.

Taking his cue from Lévy and others, Moulthrop proposes a new kind of cybertextual scholarship. He calls it ‘intervention’ – a term he intends to cover practical contributions to media systems that

⁸⁸ „ERAB calls for ‚new renaissance’ in Europe,“ CORDIS News 2009-10-07, European Commission CORDIS – available at http://cordis.europa.eu/fetch?CALLER=EN_NEWS&ACTION=D&RCN=31330 (last accessed on November 24, 2011).

⁸⁹ Stuart Moulthrop, „What the Geeks Know: Hypertext and the Problem of Literacy,“ paper given at ACM Conference on Hypertext and Hypermedia, Salzburg, Austria, 2005 – available at <http://iat.ubalt.edu/moulthrop/essays/> (last accessed on November 24, 2011). This and the following paragraph builds on both of Moulthrop’s articles.

are intended to challenge fundamental assumptions. If all of this seems impossibly utopian, he writes,

Remember that in Snow's account of the two cultures, it was the scientists who seemed more responsible to the world's pressing problems, and more optimistic about solutions. History bore out Snow's assessment. As biologists and economists in the last century met the challenge of feeding an exploding population, we might take up the work of reinventing literacy for a world increasingly beset by ignorance. No doubt a change in agenda by any particular group of academics will not in itself correct the widespread misunderstanding of media, let alone combat vast global threats like the rejection of modernity. Yet as all in this community know, ideas that start here – e.g. the World Wide Web – have tended to exceed initial expectations.⁹⁰

According to Moulthrop, that is, it is Snow and his followers who have 'won' the two cultures debate – and this is a good thing. Moulthrop is not the only scholar to remark on the suspicion of the achievements of science that is widespread in many parts of the humanities and that seems to go hand in hand with a more general, anti-Enlightenment hostility to Western values and institutions. Raymond Tallis sees Leavis as a portent or representative figure of this sort of anti-scientific bias, for example. Just as Leavis would see Snow as a portent of (bad) things to come, so Leavis himself would point toward the aggressively anti-empirical stances of the postmodern. "Leavis would," Tallis writes, "rank high in the demonology of an intellectual culture that valued rigour and the search for truth." In the humanities, Leavis is instead considered to be one of the most influential twentieth-century literary scholars. This is odd, says Tallis, and admonishes us that,

A scholar who can discriminate the six modes of sensibility in Saint-Amant but has not yet caught up with Copernicus should not rationalise his ignorance but amend it; otherwise he will be as much a plaything of politicians in relation to the major issues of our time as the readers of the more downmarket tabloids.⁹¹

In her new book, *Planned Obsolescence: Publishing, Technology, and the Future of the Academy* (2011), Kathleen Fitzpatrick issues a similar warning.⁹² If humanities scholars do nothing, our

⁹⁰ Moulthrop, „What the Geeks Know: Hypertext and the Problem of Literacy.“

⁹¹ Tallis, „The Eunuch at the Orgy: Reflections on the Significance of F.R. Leavis,“ 47, 60.

⁹² Kathleen Fitzpatrick, *Planned Obsolescence: Publishing, Technology, and the Future of the Academy* (NY: New York University Press, 2011).

disciplines will simply cease to be relevant. The economic crisis has given urgency to debates about the role of the humanities – again, again. From fights over models of academic publishing to debates about what form academic writing should take in the digital age, humanities scholars are faced with major challenges. And the only thing that is certain, Fitzpatrick argues, is that if we hide our heads in the sand and refuse to engage with the new media, we will lose.

I agree with Fitzpatrick. Unless we delve into mainstream digital culture, our voices will disappear under the flow of information constantly available online. And I agree with both Moulthrop and Tallis that humanities scholars have to stop being so biased in our views toward the natural sciences and their practitioners. Research done within the natural sciences is just as much about human life, and has just as profound implications for our human world as has research undertaken within the humanities. On this issue, the Snows of this world could most definitely teach the Leavises something.

“Reinventing literacy for a world increasingly beset by ignorance,” as Moulthrop would have it? Certainly. Is DH the place to do so? Possibly – with a few caveats in mind that concern the nature of the humanities. This is where Leavis and his writing about what it is the humanities can truly contribute, given the right circumstances, come in. What Leavis tried to teach Snow is first of all that we need to pause, from time to time, to really THINK. Depth is just as important as width, and the defense of diversity, of the need for spreading information and knowledge to everyone, does not adequately answer complaints about shallowness. From popular books such as Andrew Keen’s *The Cult of the Amateur*, and Jaron Lanier’s *You Are Not a Gadget* to more serious works such as Nicholas Carr’s *The Shallows*,⁹³ following his *Atlantic Monthly* essay “Is Google Making Us Stupid?” from 2008, the theme of the lack of depth in our lives today as a result of the fast-paced

⁹³ Andrew Keen, *The Cult of the Amateur: How Today's Internet is Killing Our Culture* (London: Crown Business, 2007), Jaron Lanier, *You Are Not a Gadget: A Manifesto* (NY: Knopf, 2010), Nicholas Carr, *The Shallows: What the Internet Is Doing to Our Brains* (NY: W.W. Norton & Company (June 6, 2011).

digital media figures very prominently. “What is the point, anyway?,” asks William Powers in *hamlet’s blackberry*, summing it all up in a wonderfully Leavisian move:

What’s the goal at the bottom of all this juggling and rushing around? It’s one of those questions you avoid thinking about because it’s so hard to answer. When you start wondering about your own busyness, pretty soon you’re pondering much deeper questions such as, Is this the kind of life I really want? From there it’s just a short hop to the big-league existential stumpers, Why are we here? And Who am I?⁹⁴

With shallowness and superficiality may follow not only a loss of philosophical depth, but also a loss of that critical voice which, as Leavis argued, is sorely needed to make sense of all the changes constantly happening around us – not least due to major technological developments. Who will question the ethical implications of scientific work, and who will help us uphold what Leavis called our “cultural community or consciousness,” transmitted through historical and literary sources, if no one is taught to dig deeper and to think against received and commonly accepted ‘truths’?

When it comes to doing good research, moreover, the issue is not just one of spreading the message – of process. At a very elementary level, in order for there to be anything to spread there has to be a message first, some new insight or discovery. The tendency toward emphasizing process in much current DH literature is fine – and understandable as a counterweight to longstanding traditions of only valuing products that would be published by a few, elitist university presses. But I find it somewhat problematic when it carries with it a wish to blur distinctions – first of all that between teaching, research and other activities, and second, that between the work done by each individual researcher and his/her team, or the digital community.

For Martin Weller, the keywords for digital scholarship are ‘digital, networked and open.’ In his book *The Digital Scholar* (2011), which mostly focuses on the benefits of DH for teaching and for the dissemination of knowledge, we find this interesting description of the process of digital scholarship:

⁹⁴ William Powers, *hamlet’s blackberry: Building a good life in the digital age* (NY: Harper Perennial, 2010), 10.

The authors, let's call them Frank and Sally, know each other through a combination of commenting on each other's blogs, being part of the same network on Twitter where they share many of the same contacts and some email exchanges. Following a blog post by Frank on pedagogy for networked learning, Sally posts a long piece in reply. They decide to collaborate on a paper together and work in Google Docs to produce it. Sally gives a presentation about the subject to her department and shares the presentation on Slideshare. She posts the link to this on Twitter, and it gets retweeted several times by people in her network, some of whom comment on the presentation. Frank posts a draft of their chapter on his blog and again receives a number of comments which they incorporate into the paper. They submit it to an open access journal, where it is reviewed and published within two months. They both tweet and blog about the paper, which gets widely cited and has more than 8,000 views. As a rest of the paper, they give a joint presentation in an open, online course on networked learning.⁹⁵

What is most obvious about the process outlined here is that it takes place, for the most part, within social networks such as blogs and Twitter. The topic concerning pedagogy for networked learning, this makes good sense – and indeed, the pace with which Frank and Sally's article finds its way into a publishing venue as well as the number of comments it receives are admirable. Would the topic be a different one – one that does not concern pedagogy, but instead literary complexity or historical context, say – one wonders whether it would lend itself equally well to a research process conducted via social networks. Taking the blog (and Twitter) to represent the research process itself, Weller asks, “What this may indicate is a shift from specific outputs and a focus on ongoing activity, engagement and reputation, which would be more difficult to measure and reward. Most people know what a good publication record looks like, but could we recognise a good blog track record?”⁹⁶

Weller's scholarly process is not only one which emphasizes ongoing activity and engagement at the cost of specific output; it is clearly also a communal one. In the end, it can be quite difficult to say who contributed what. For many visionary DH scholars, this is one of the best things about their scholarship, co-creation and teamwork representing one of the transformative features of DH. Again, there is much to be said for this. However, we should also recognize that the loss of

⁹⁵ Martin Weller, *The Digital Scholar: How Technology Is Transforming Scholarly Practice* (London: Bloomsbury Academic, 2011), 8.

⁹⁶ *Ibid.*, 60.

individuality implied in this co-creation may have certain negative consequences. In his book, *You Are Not A Gadget*, mentioned above, Jaron Lanier is worried about the amount of remix worship going on in cyberspace, for example – a worship which he fears will end up blurring the difference between original works and those that are remixes or ‘rip-offs.’ There is so little focus on the underlying first-order expression that the creativity of the original work is being downplayed, if not downright forgotten, he claims, and this may result in the loss of original culture and creativity. Most importantly, however, open wisdom-of-crowds software movements are destroying individuality. “Spirituality is committing suicide,” Lanier warns us, “consciousness is attempting to will itself out of existence... the digital hive is growing at the expense of individuality.”⁹⁷

In *The Most Human Human: A Defence of Humanity in the Age of the Computer* (2011), science writer Brian Christian refers to Lanier and his skepticism of decentralized projects such as Wikipedia which involve large groups of collaborators and therefore do not have one central personal vision.⁹⁸ As the title of his book implies, Christian is interested in exploring what it means to be human and to be intelligent, in an age in which we are interacting with computers so sophisticated that we cannot immediately figure out whether or not *they* are human. In a chapter on ‘Authenticating,’ Christian talks about the ‘death of the author’ in relation to machine translation of literary works. Machine translations of the sort offered by Google Translate may increasingly find their way into the world of international business, but when it comes to literary novels they are not of much use. What this suggests, writes Christian, is

That the task of translating (or writing) literary novels cannot be broken into parts and done by a succession of different *humans* either – not by wikis, nor crowdsourcing, nor ghostwriters. Stability of point of view and consistency of style are too important. What’s truly strange, then, is the fact that we do seem to make a lot of art this way.

⁹⁷ Lanier, *You Are Not a Gadget*, 20, 26.

⁹⁸ Brian Christian, *The Most Human Human: A Defence of Humanity in the Age of the Computer* (London: Penguin/Viking, 2011), 26.

To be human is to be *a* human, a specific person with a life history and idiosyncrasy and point of view; artificial intelligence suggests that the line between intelligent machines and people blurs most when a purée is made of that identity. It is profoundly odd, then – especially so in a country with a reputation for ‘individualism’ – to contemplate how often we do just that.⁹⁹

What machines cannot do, according to Christian – communicating, intuiting, even understanding – is what anonymous crowds also cannot do. This is very interesting, and it recalls Leavis’s complaint that “individual lives cannot be aggregated or equated or dealt with quantitatively in any way.” That individual, that human dimension, which Leavis found to be lacking in Snow’s “Technologico-Benthamite” view of the world, may help explain, I would argue, why it is that some humanities scholars tend to think that there is altogether too much ‘digital’ and too little ‘humanities’ in DH.

Both Snow and Leavis were right, as I see it – both raised issues that are important to this day. Snow was correct to point to the negative attitude of many humanities scholars vis-à-vis the natural sciences and technology. And he was correct in criticizing humanities scholars for not seeing that research undertaken in the sciences goes as close to the core of our human existence as does that undertaken by humanities scholars. Leavis, on the other hand, hit on something very fundamental in his criticism of Snow’s lack of understanding for the more existential questions that occupy humanities scholars as well as for the need for critical humanities scholarship.

In contemporary discussions about DH, echoes are heard of the famous ‘Leavis/Snow controversy’. DH scholars have always perceived the need for bridging the gap between the two cultures. In attempting to do so in practice, they have (implicitly) acknowledged that Snow was right to raise the problem of the two cultures and to call for a change of attitude as well as of educational practice. In order to convince those of their colleagues in the humanities who are reluctant converts to DH, they also have to pay attention to the concerns voiced by Leavis, however. As Stefan Collini puts it, “the experience of recent decades has suggested that improving the standards of living in

⁹⁹ Ibid., 30.

Third World countries rests more on understanding the very complex operation of political and cultural forces at work than on understanding the science involved in the latest technological advance.” It is therefore not altogether obvious that “an education in physics or chemistry is a better preparation for handling the world’s problems than an education in history or philosophy.”¹⁰⁰

In the end, the tools provided for humanities scholars by digital technology are neither the panacea that will solve each and every problem for the humanities, as enthusiastic DH defenders would have us believe; nor are they the root of everything bad that is currently happening within the humanities, as the critics of DH maintain. Neil Postman reminded us many years ago, that there is inevitably something to be gained, but also something to be lost with every new technological development. Talking, in 1998 to a gathering of theologians and religious leaders in Denver, Colorado, about “Five Things We Need to Know About Technological Change,” Postman remarked on the things we should all endeavor to understand about how society is impacted by technological innovation. His concluding remarks continue to be as apt today as when he first made them:

And so, these are my five ideas about technological change. First, that we always pay a price for technology; the greater the technology, the greater the price. Second, that there are always winners and losers, and that the winners always try to persuade the losers that they are really winners. Third, that there is embedded in every great technology an epistemological, political or social prejudice. Sometimes that bias is greatly to our advantage. Sometimes it is not. The printing press annihilated the oral tradition; telegraphy annihilated space; television has humiliated the word; the computer, perhaps, will degrade community life. And so on. Fourth, technological change is not additive; it is ecological, which means, it changes everything and is, therefore, too important to be left entirely in the hands of Bill Gates. And fifth, technology tends to become mythic; that is, perceived as part of the natural order of things, and therefore tends to control more of our lives than is good for us.

If we had more time, I could supply some additional important things about technological change but I will stand by these for the moment, and will close with this thought. In the past, we experienced technological change in the manner of sleep-walkers. Our unspoken slogan has been “technology über alles,” and we have been willing to shape our lives to fit the requirements of technology, not the requirements of culture. This is a form of stupidity,

¹⁰⁰ Collini, “Introduction,” *C.P.Snow The Two Cultures*, lxix-lxx.

especially in an age of vast technological change. We need to proceed with our eyes wide open so that we many use technology rather than be used by it.¹⁰¹

¹⁰¹ Neil Postman, “Five Things We Need to Know About Technological Change” – available at <http://www.mat.upm.es/~jcm/neil-postman--five-things.html> (last accessed on November 29, 2011).