1. The PhD in Digital Humanities

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The dream of every cell is to become two cells.
—François Jacob

Overview

The PhD in Digital Humanities was established at King’s College London in 2005. By 2010 experience had persuaded us that collaborative supervision of interdisciplinary work is the norm for doctoral research in our subject. This, you might think, is obvious, but we had created the PhD deliberately without constraining what students might make of it. (More on origins and developments later.) Discussion with students and colleagues led us to suspect that—despite the obvious popularity of nearly anything that the adjective “digital” may be attached to and despite the relative success of the degree program in attracting students—it’s title remained an impediment. We reasoned that as the identifier for a doctoral program in a departmentalized world, “digital humanities” implies its own subject and so by implication excludes others. In a sense, creating this problem in categorization is a positive result from many years of struggle for recognition, but at the same time, it leads to a serious issue. In effect, the rubric requires a potential student to infer that the humanities subject that most interests him or her can be studied with critical involvement of digital tools and methods. No amount of qualifying prose, we thought, could overcome what the rubric seems to imply. The name of our degree was in effect hiding the interdisciplinary collaboration that our experience had shown was of the essence—and the most compelling, indeed innovative aspect of the degree.
Hence, in Autumn 2010 I began negotiations with the academic departments in the School of Arts and Humanities to create multiple synonyms of the “PhD in Digital Humanities,” one for each discipline or disciplinary area: thus PhD programs in Digital Classics; Cultural Research; English and American Studies; Film; French; Hispanic and Portuguese Studies; History; Late Antique and Medieval Studies; Musicology; Theology and Religious Studies. (Creating multiple names for the same program rather than multiple programs was a far simpler and quicker to accomplish administratively.) The idea was to make the possibilities of the PhD in Digital Humanities explicit, rather than keep them concealed under a name that is paradoxically both popular and obscure.

The resulting programs were launched with the renaming of my department, from the Centre for Computing in the Humanities to the Department of Digital Humanities—CCH to DDH—in Spring 2011. At the same time we retained the “PhD in Digital Humanities” to denote studies of technical, methodological or behavioral subjects mostly in our field—or in subject-areas for which a collaborating department is not available but which we could support internally. The scheme was designed so that applications to all the degrees share the same process of evaluation, described below. Since the scheme of one degree under many names began a year ago, it has chiefly brought in new students for the collaborating departments but in one instance taken on a student who began in another department but discovered he needed a significant digital component to his degree.

Origins

In 2005, the CCH established its PhD program when an MA student of the department showed keen interest in pursuing doctoral studies. In comparison to the process in some other countries, this happened quickly and with very little effort, since administrative procedures for creating a doctoral program in the UK are much simpler than they are, for example, in North America. In the UK, as Holm and Liinason have noted, “it is easy to set up courses and degrees in disciplines that can demonstrate market demand.” Indeed, anticipated market demand may be sufficient

1 Ulla M. Holm and Mia Liinason, “Disciplinary Boundaries between the Social Sciences and the Humanities: Comparative Report on Interdisciplinarity” (report prepared for the Research Integration: Changing Knowledge and Disciplinary Boundaries Through Integrative Research Methods in the Social Sciences and the Humanities project,
if a plausible case for such demand can be made.

As it happened the initiating student dropped out after a year, but two others joined in 2006. Since then, the program has grown at an accelerating pace, especially within the last academic year (2011–12). At the time of writing there are fifteen students enrolled and in progress, two of which are likely to finish before the end of 2012; seven who have been offered a place in the program and are expected to enroll in Autumn 2012; eight in the final stages of application, all of which are highly likely to be offered a place and subject to funding to accept for Autumn 2012; and fifteen in the initial stages. In total, therefore, there are currently forty-five students and potential students involved. I will review the projects undertaken by the cohort of fifteen students below. The queue of seriously interested students fluctuates but tends to maintain the current level.

The Process of Application and Admission

The nature of the British PhD has necessarily shaped the degree program. In particular, unlike the North American PhD, the British is research-only, spanning a maximum of four years full-time (eight part-time). Students begin with MPhil status; after approximately a year of full-time work or its equivalent, they submit application for upgrade to the PhD. The upgrade interview does not constitute a comprehensive examination of the student’s disciplinary knowledge, as in North America, rather the ability to carry out doctoral-level research within the scope of his or her project, or as the Australians denote it, a confirmation of candidature. Throughout the program, before and after the upgrade, reports of progress are now required biannually.

The brevity of allotted time for a research-only degree means that a well-developed, cogent research proposal is the primary focus for admission. Partly because the subject is new and partly because it is highly interdisciplinary, we have found that most students need a significant amount of help developing their proposals before formal application. Usually a student contacts the Director of the Doctoral Program with little more than a notion, sometimes not even what might be called a research problem. If the notion is plausible and the student undeterred by the commitment to doctoral work and its costs—approximately 20% survive
to this point—he or she is encouraged to write a draft of roughly two pages (reduced in size from the much longer document formerly required). Through a cycle of commentary and revision, often iterated several times, perhaps over months, either a cogent proposal emerges or the weakness of the idea becomes obvious. If the proposal is sufficiently strong and if adequate supervision can be provided within or beyond the Department, the student is encouraged to apply. The process is laborious and may indeed be trimmed with the greater number of applicants we expect, but to date it has pushed us to discover potential dimensions of the PhD that we might not otherwise have seen.

In a few cases to date informal arrangement for co-supervision has been made with academics in institutions beyond the College. Arrangements with cultural institutions in London or nearby are certainly possible though none have yet been successfully made. A mechanism for formalizing such arrangements is now being put into place with the approval of the School of Arts and Humanities. Discussion is also ongoing with a Canadian institution about the possibilities for close ties that would establish cross-institutional co-supervision, perhaps a joint degree. Although paid employment cannot be directly related to the degree, part-time students can benefit more than financially from a job in an organization whose work is in the same area. Currently, for example, one student has such a job with an open-access publisher in parallel with his PhD at King’s.

In the UK the PhD is slowly moving somewhat closer to a North American model by providing instruction in research-related skills for the first year, e.g. at King’s through the UK Doctoral Training Centre scheme and through courses offered by the Graduate School. For the PhD in Digital Humanities and its derivatives the department itself offers modules in its MA programs to which new students may be assigned by their supervisors.

No minimum requirements for a specific level of technical knowledge have been set, thus leaving room for a merely instrumental use of existing tools and for a purely speculative or theoretical project. Where such knowledge is absent, demand is placed on critical use of off-the-shelf tools or meticulously careful, intellectually sophisticated reflection on manifestations of computing. An acceptable dissertation

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I teach one of these courses, on interdisciplinary research, which emerged from my experiences in pursuing the digital humanities wherever it might lead. Interested readers should contact me for more information.
must contribute to the digital humanities as a whole, at minimum
by surveying previous work in an area, extending it to new areas
of application and reflecting critically on what the dissertation has
achieved. Speculation on computing in its cultural significance and
influence, without engagement with past and/or current research in the
digital humanities, is discouraged.

The norm for the PhD remains full-time study. Typically the student
is resident in London, but compelling cases for non-resident study have
resulted in the “semi-distance PhD,” as we have called it. The practice would
seem to be quite common now, especially for an institution located in an
expensive city—but even more for a minority discipline that needs doctoral
students in order to grow. Basically, a student wishing to take up the semi-
distance option must agree with his or her supervisor on a schedule of visits,
which of course can include those carried out on the internet or by telephone.

Funding remains a problem for many students. One of ours who has
been especially clever raising funds from unexpected sources has
co-authored (and sells) a booklet, The Alternative Guide to Postgraduate
Funding, to help address the problem.\(^3\) Otherwise, we are actively looking
into building studentships into research project applications (as a staff
member, Dr Peter Stokes, has already done for a digital palaeography
project—further information on this below) and other fund-raising
ventures. But the fact that all but a few of the students, past and present,
have funded themselves or come with non-UK funding underscores the
level of students’ commitment to the idea of this degree. From the beginning,
it has been demand-driven. But what is the idea?

**The Originating Idea of the PhD**

Unaware of any precedents, we began more with questions than with a
scheme or set of criteria, as I indicated earlier. We wanted to discover if a
PhD on the subject was possible, indeed, if the idea itself made sense, and
if it was both conceivable and possible, what it might involve and how it
might be structured.

From the outset, its primary objective was clear: to produce culturally
literate and critically as well as digitally adept scholars. Furthermore, we
knew we wanted to equip them to pursue compelling research questions

\(^3\) For more information, see “GradFunding”, http://www.gradfunding.co.uk/.
with computing, and whenever possible to do this not just in their disciplines of origin but wherever those questions might lead, including into the methodological heartland of our subject. We were much less clear about the kinds of knowledge and experience we might require of applicants, about existing models of research we might adapt and about the mixtures of practical, conceptual and theoretical work that might prove best. We did not proceed strictly from our competencies and interests to specify the range of subjects a student might undertake, nor did we limit applications to pre-existing studentships, but rather deliberately left the boundaries undefined and the possibility of self-funding open. We preferred to see what might happen, then adapt ourselves to the demand, if any, and perhaps eventually make these boundaries explicit.

The openness of the PhD in Digital Humanities already puts considerable demand on the teaching and research staff of the DDH to match incoming doctoral research projects with adequate technical and non-technical support. But in a market-driven academic economy, as ours is, this demand creates exactly the kind of problem one wishes to have, whatever the temporary discomfort.

**Current Projects**

At the time of writing collaborative supervision is ongoing within the disciplines of these Departments and Programs: Classics; Culture, Media and Creative Industries; English and American Studies; Hellenic Studies; History; Music; Philosophy; Portuguese; Theology and Religious Studies; with a professor at University College London, Translation Studies; with a researcher in the Darwin Correspondence Project, Cambridge; with the Director of the Women Writers Project, Brown, and a professor in Communication and Media Studies at the Royal Institute of Technology, Stockholm; and with a lecturer in History, Brasenose College Oxford. The cohort of enrolled students whose projects are sketched here numbers fifteen, as I noted above. In addition, I include some mention of the projects likely to begin in Autumn 2012.

Of the projects of enrolled students, seven center on or are seriously involved with verbal language (one with gender), ten history, one musicology, one social anthropology and historical geography, one philosophy, one palaeography and two computational methods. Of these five involve textual encoding, two textual editing, three relational database technology,
four corpus-linguistic methods and one statistical analytics. In two projects, the students are designing and building their own modeling software. The projects yet to begin include interests in digital literature, gendered language, music, museums, social networking and communications.

For the sake of brevity, the following includes only the projects of enrolled students.

Projects in Language

The first of seven projects under this heading is a detailed analysis of how a translator’s awareness of linguistic features in the original text affects his or her strategies of translation and so alters the meaning of the rendered text. It considers three twentieth-century American novels recently translated into Lithuanian. Corpus linguistic techniques and XML markup are certain; as of yet the extent to which statistical tools will prove relevant is unknown. For support on the Lithuanian side a senior professor in Vilnius has agreed to collaborate, and for support with translation theory another senior professor from University College London, as just noted. From the digital side the primary question here remains the powers and limits of text-analysis, which despite several decades of work are still not entirely clear and indeed still capable of surprising us.

In another project, stylometric analysis is applied to possible co-authorship of Titus Andronicus, usually attributed solely to William Shakespeare but possibly involving George Peele. Sentence-patterns are to be used as the primary discriminator. A senior professor and his research associate in the Institute of English Studies, London, have agreed to collaborate informally on the supervision, as has another senior professor in Australia. Colleagues in stylometrics were involved in evaluating the research proposal for admission. It is at first glance a fairly standard kind of authorship study, but as always the devil is in the detail: what patterns are revealed with what approaches, and how persuasively?

A project in what might be called interoperable bibliography is underway in collaboration with a professor of computational linguistics in the Department of Philosophy. The primary question is the extent to which fully automated techniques can pick out canonical references to classical Greek sources from secondary literature. Here the student
is writing the software, which is an integral part of his research; it has potential use well beyond the doctorate, e.g. with bibliographies such as L’Année philologique. Further questions pertain to the effects of the tight interlinking of resources that could result from application of such tools across the discipline. The hard problem of interoperability is central, as noted.

An editorial project, co-supervised with Classics, is comparing current work on the digital side with editorial practices in printed critical editions of Homer, using the first book of the Odyssey as its focus. The student is considering The Chicago Homer and Homer Multitext as well as other digital products. The questions here are obvious but difficult: what do scholars of Homer want from an edition that the digital medium can better provide than the codex? What does Homer have to teach designers of digital editions? What accomplishments of the printed critical edition are at least currently beyond the reach of a digital edition? The specific focus on a single work places the questions of design precisely at the level at which scholars work.

A project in the analysis of gendered language takes as its data Swedish dramatic texts from a large archive of historical literature. Its central research problem is how questions of gender can be explored in this archive. Two obvious technical approaches are corpus linguistic methods to discover the workings of gendered language and text encoding to provide for retrieval.

Developing tools for aggregation and analysis of textual corpora is the object of another project. It begins in a survey of current corpus tools in light of the uses to which they are put and their perceived limitations, then moving on to implementation of prototypes designed to overcome these limitations and iterative trials. The audience for these trials will be researchers with a range of computing skills working in a variety of languages and disciplines. The project will take into account previous iterations of questioning the state of text-analysis but, unlike so much of previous debate, is undertaking its questioning of possibilities systematically.

The final project under this category is probing the interconnections between changes in publishing and changes in the humanities that stem from digital transformations of the book. It examines not only effects on text and how we relate to it when reading but also how the processes and mechanics of the publishing industry shape the digital text. What
is needed, the student argues, is grounding in the concrete realities of the publishing industry, the situations of authors and readers and all the ways in which text is made available for reading. The problematic notion of de-materialized text—of information that moves unchanged through various media—plays a central role in this research.

Two additional projects in analysis of language are primarily historical and are described below.

**History by Prosopography, by Text-Analysis and by Palaeography**

Of the ten projects that work with historical materials, seven are chiefly historical studies. One of these involves a study of political language; one of language used to characterize a particular subculture; two involve prosopography, i.e. history derived from the historical actors, and two manuscript studies. The prosopographical and one of the manuscript projects use relational database technology, and one of these uses mapping software. The two studies of language use corpus techniques. All are co-supervised with colleagues at King’s.

One of the prosopographical projects focuses on the fourth- to early fifth-century *Ecclesiastical History* by Socrates Scholasticus. Its aim is to analyze biases and interests of the author and to chart the embedded geographical information. This project continues in the footsteps of the Prosopography of the Byzantine World, developed at King’s, and seeks on the computing side to refine our understanding of digital prosopography by critiquing earlier ones as well as by exhibiting new approaches.

The other prosopographical project concentrates on high officials of the Portuguese court under the reign of John III (1521–57). It uses correlated assertions about these officials to enquire into the commonplace but incompletely understood notions of courtly service, social mobility, power and social reproduction. It asks if the group of individuals in service constitute a homogeneous group, whether patterns of social promotion can be discerned and a number of other questions to which answers are currently unknown. Categories of roles and typologies of interrelation, enforced by database entry, are themselves research questions. As with all such projects, the question of technological adequacy is forced by the normal intractability of historical data. This project also uses relational database technology.
One of the two manuscript projects is palaeographical; the other is concerned with illuminations.

The palaeographical project involves analysis of 6000–7000 Norwegian manuscript fragments from the period c.1000–1300 in order to investigate ecclesiastical connections between England and Norway. To date, the corpus has proven too large for manual analysis. For this reason the student will use digital methods under development in the department, as part of Dr Stokes’ DigiPal Project, and within Scandinavia. These methods will be applied to suggest heretofore-unnoticed relationships, such as between letterforms and layout, and to identify fragments that were likely produced by the same scribe or scriptorium, or indeed were once part of the same book. In turn, these relationships will help to address key questions about English influence in Norway, ecclesiastical links between the two countries, and English script types in Norwegian scriptoria and their influence on Norwegian vernacular styles. The student is also planning to create an online resource that makes some of this research available to scholars and the general public. The dissertation is also intended to promote links between the digitization projects in Scandinavian and at King’s College London.4

The project on illuminations centers on Hebrew manuscripts in medieval Portugal, questioning the originality and identity of specifically Portuguese illumination. It is investigating the iconographic features of Hebrew-Portuguese illumination, the salient features of the known illuminators and/or scribes, the iconographic relation between Portuguese and Castilian Hebrew book illumination and the connection between documented technical knowledge of pigments and other painting materials and the corpus under investigation. Using analytic and descriptive computer-assisted techniques it is attempting thus to characterize the main features of the ca. thirty manuscripts of the corpus.

Of the two corpus-linguistic projects, one is studying late nineteenth-to early twentieth-century grassroots politics in East Anglia through an analysis of speeches as transcribed in local newspapers. The student has laboriously built his own million-word corpus of election speeches, 1880–1910, and has to hand two larger reference corpora. From his corpus,

using simple concordancing tools and elementary statistics, he argues quite persuasively for the close fit between the language of electioneering and the capabilities of the tools we have. He shows the inadequacy of remembered instances and broad generalizations drawn from long familiarity with historical data. Here, digitally, is an extension of known methods to a relatively unexplored kind of language, demonstrating their utility and power. Historically it demonstrates how close attention to the data upsets received knowledge.

The other corpus project focuses on perceptions of the Irish immigrant population in London from 1801 to 1820, in the period between the Acts of Union and beginnings of the campaign for Irish emancipation. Its central question, to be pursued by a corpus-analytic study of text from London newspapers and magazines, is how the historical print media shaped the vulnerable local communities of the Irish in London for better or for worse. It asks how were the Irish perceived in the relatively quiet period before emancipation became a prominent issue? What roles did the popular media play?

Musicological Editing

The question here begins with the same dilemma as the Homeric edition: the still fluid and hotly debated nature of digital textual editing. The focus, however, is on the strongly performative dimension of musicological editions; several difficult but fascinating technological issues are faced, including development of recommendations from the Music Encoding Initiative. The student has begun with these recommendations but is writing his own software to model forms of the musical text. As expected, this project involves collaborative supervision with the Department of Music, but the student is also working closely with the Carl-Maria-von-Weber-Gesamtausgabe or WeGA project (http://www.weber-gesamtausgabe.de/) in Paderborn on a digital edition of Carl Maria von Weber’s opera Der Freischütz.

Narratological Geography

In this project, the student is investigating the differences between verbal and cartographic information for geographical purposes, asking, “What is the difference between a text and a map?” His project is supported informally by three scholars in Norway as well as by colleagues in the
department at King’s. He is using testimony of Norwegian and Sami people along the border with Sweden/Finland in the mid 18th Century as collected and transcribed by an army major at the behest of the Danish government. From this testimony, which was printed in the mid twentieth century, he has produced an XML-encoded text. He is using the encoded text to model the kinds of information contained in the verbal testimony to see if, as he suspects, words tell more than maps, or at least do so differently. Historical, philosophical, geographical and anthropological investigations thus sit alongside software modeling techniques. Each informs the other.

Socio-Philosophy of Digital Traces

The basic premise of this project (currently in suspension while the student completes engineering-related doctoral work in Japan) is that a new meaning of identity has arisen out of the prevalence of mobile digital devices and the frequency with which they are used. On the social scientific side, the student proposes to track the actual behaviors of selected people; on the philosophical side, he is examining the idea of personal identity phenomenologically; on the technological side, he has been involved in designing and constructing devices. He has also written software for the iPhone to monitor such behaviors. Originally, the philosophical questions had priority, but with the engineering work it has become obvious that these questions need to be postponed until the behaviors they seek to illumine are more adequately manifested.

Philosophical Questions of Performance

In research begun about a year ago, the student is examining the ontological questions raised by the involvement of dance with digital technology. Considering the multiple technological interfaces with which we engage when watching recorded performance, she is investigating the ontological repercussions for dance of this new mode of watching. She is concerned with the metaphysical nature of online performances in their multiple forms. Looking at full-length documentations, edited representations, performances made for the screen and specifically for the Internet, she is assessing the differing ontological status of these multiple formats and working towards an understanding of how multiplicity of representations impacts on the ontology of dance.
Conclusions

What may we conclude from these last seven years of the PhD in Digital Humanities? Again, it seems obvious that the degree is defensible from a scholarly perspective as well as attractive to students, who from the outset have driven its development. By the end of the 2011–12 academic year, however, only one student had completed this degree; only two are in the final “writing up” phase; and only seven of the current fifteen enrolled students have converted from initial MPhil to PhD status. In other words, as should be clear from the discussion, we still have quite a bit to learn, perhaps even more than our students do.

One lesson we have learned concerns what one student has called “the openness of the program,” that is, the license it gives to do research of any kind that involves critical work with digital tools and methods. The generosity of this license is by design, which is in turn a response to the plasticity of computing studied methodologically. However, it would not be practical to offer were it not for the supervisory talent provided by a major research institution located in one of the principal cities of the world. It would never have flourished were it not for the remarkably collegial academic culture in the School of Arts and Humanities at King’s and the understanding built up over many years that the discipline we now call digital humanities is no less nor more than one among many.

Taken together, the projects I have described (and a number of others likely to begin in Autumn 2012 that I have not mentioned) show no sign of providing a map of the digital humanities. Rather their variety suggests, like Turing’s design, an indefinite expansiveness. Inevitably, as the program grows, they will show the limitations of subject and approach that the Department of Digital Humanities at King’s College London can properly cover and that British academic culture favors. Such a program in Australia, for example, would look rather different; so also would one in Germany. Nevertheless, the openness of the program to anything that we can support and that the culture favors, placing no other restrictions on it, seems appropriate for such a young and expansive discipline.

It is also perhaps worth mentioning that approximately half of the current students in the program are women.

So far the results of the program are largely unsurprising though very gratifying, especially to someone who has been arguing for the last quarter century that our subject is genuinely and independently academic at the highest levels. Perhaps the most important result is that a PhD in
the digital humanities makes sense. But, crucially, the sense-making has
in its first six years been almost entirely the work of the students. Earlier
I said that the development of the PhD has been from the outset
demand-driven, but neither “demand” nor “driven” are the right words
to describe these students’ contribution to our discipline. It is not demand
that has driven but desire that is creating. “Real scientific research,” John
Ziman has written, “is very like play. It is unguided, personal activity,
perfectly serious for those taking part, drawing unsuspected imaginative
forces from the inner being, and deeply satisfying.”5 Partially subtract
“scientific” and, for now, “unguided” to name what our students are doing.

What, then, is the PhD in Digital Humanities, exactly? The simple fact
is that we do not have a stable answer, but all the evidence suggests that
the intelligent desire powering its evolution will provide us with one. The
simple fact is that this PhD is not just a framework for research, providing
supervisory support and ensuring quality, but is itself empirical research
into the best framework to adopt in order to further develop the intellectual
culture of the digital humanities. Meanwhile, advertised jobs in the field
are proving difficult to fill because qualified applicants are in short supply.
Demand, need, desire and ability to produce them are not, however. It is
too early to say anything useful about placement of students in jobs. Watch
this space.

5 John Ziman, “Puzzles, Problems and Enigmas,” in Puzzles, Problems and Enigmas:
Occasional Pieces on the Human Aspects of Science (Cambridge: Cambridge University
part of the science curriculum of the Open University.