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How do we get to the Humanitarium from here?

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Abstract

For the past century, the sciences have made terrific strides in capturing the public imagination. From dedicated television channels to online learning materials to science-related entertainment and educational facilities for families in practically every major city on the planet, the scale of public relations has been impressive and continuous. However, the same cannot be said for the Humanities. Although we certainly have cultural institutions for adults, ranging from art galleries to opera houses, their primary emphasis has been on providing opportunities for passively consuming cultural production, rather than with the core interest of the Humanities, which is in enriching objects of study by analyzing them through a variety of theoretical lenses. In this paper, I argue, as others have been doing for some time, that the Humanities need to learn in this respect from the sciences, in order to increase their public stature. Further, the driving force behind this education is Digital Humanities. Since public relations has been on the back burner for so long, this initiative is both important and daunting; it is one of the ways in which the Digital Humanities while at the same time encouraging them in a task that seems difficult enough that everyone wishes it was not necessary.

Introduction

At some point around the turn of the millennium, I was shown a graph of federal research funding in the USA. It was divided into the conventional three categories used in North America, and presumably elsewhere: Medicine, Science, and the Humanities. What was astonishing about the graph was that it only had two bars. The bar for medical research reached to the top of the page, and the bar for scientific research was about a third of the page. But the bar for support for research in the Humanities was invisible at this scale — you would have had to use log paper for it to appear. I used to point to this graph, where the Humanities bar should have been, and say, "Here is where I get my research funding." The situation hasn't changed. Figure 1 shows a similar graph from a 2014 report of the American Academy of Arts and Sciences, except medical research has been separated from biological research, and there are three columns for the sciences and Engineering. By dint of these changes, the Humanities are visible, but barely.^[1]



Figure 1. Comparison of research funding in the USA, 2006–2012 (American Academy of Arts & Sciences 2014, pg. 4)

The discrepancy in research support is a surprise to no one. Traditional wisdom has it that the Humanities don't need money, because the kinds of research equipment required are mostly books and other kinds of written material, with an occasional bit of travel to find books or writings that aren't available locally. Even graduate students are treated as independent entities, for whom individual funding programs are not usually associated with the research program of the supervising faculty member. The reasoning is that in the sciences, grad students typically join a lab, and most often pick up a research project that is part of the larger program of research of the supervisor. Grad students in the Humanities, however, typically consult with the supervisor, but in essence choose an independent project — then sit somewhere and read their own books.

The only problem with this model is that traditional wisdom is not entirely accurate, and is downright inaccurate when it comes to research in the Digital Humanities (DH). We digital humanists tend to be dealing with different issues — in some cases, actually creating the objects of study in order to address particular questions, and in others, building online collections, experimenting with a variety of algorithms, trying out visualizations, and so on. Although it is still unusual for a graduate student to join a DH lab, it does happen, and it happens with increasing frequency. DH research also often calls for more experimentation, less solitude, interdisciplinary teams of researchers, a broader range of more powerful equipment, and so on.

There has been some recognition of this change in the creation of specialized funding programs for DH in several countries, including Canada and the US; adding to their funding levels, however, still produces just a tiny movement in the overall graph for Humanities research funding. The deprecation of learning in the Western world as a public benefit and an essential component of democracy has been almost unremitting for a generation, and even the disciplines outside the humanities are beginning to see the effects. For example, a *Huffington Post* article from 2014 cites a recent study showing that illiteracy in the US has held steady at a ridiculous rate for a decade:

According to a study conducted in late April by the U.S. Department of Education and the National Institute of Literacy, 32 million adults in the U.S. can't read. That's 14 percent of the population. 21 percent of adults in the U.S. read below a 5th grade level, and 19 percent of high school graduates

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Literacy is a relatively low bar, and although in its basic form it is associated with primary education, at its higher levels it is required for medical and scientific research, and those higher levels have traditionally been in the wheelhouse of the Humanities. That a fifth of the adult population in the U.S. hasn't achieved even the basic levels suggests that there are systemic problems; once again, this state of affairs is not news to anyone. I hesitate somewhat to use literacy statistics, because they are notoriously politicized, but anecdotally, I meet people in the US who appear to have no literacy and little or no numeracy. Some of them are holding jobs, but usually there appear to be some workarounds in place to allow that to happen. For example, retail outlets like McDonalds use cash registers where the keys are images of the products, rather than numbers.

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What is also clear, at least anecdotally, is that the Humanities don't get much respect from the rest of the campus. It is rarely the case that upper administration at major research institutions has a background in the Humanities: a 2012 study by the American Council on Education found that 40 percent of college and university presidents in the US have backgrounds in Education, and another 20 percent come from industry [Cook 2012]. It is also often the case that the Humanities face funding cuts that are disproportionate to the rest of the campus. At the major Canadian research university where I used to work, the humanities had a three-year hiring freeze at a time when the College of Engineering had a standing open call for 100 new faculty members. We were nickel-and-dimed for everything from photocopies to office space, culminating in a cost-cutting measure where every faculty member in the Department of English and Film Studies had the telephones removed from their offices. Although it was probably intended to make a statement of some kind, the statement it actually made was that there was no need for faculty in that department to be reached through that medium, whether by colleagues, students, potential students, or the media. I spoke some years ago with one of the professors in Engineering to find out what he thought about it. "I keep watching," he said, "for something exciting to be happening over on your side of campus, and the only thing I've seen in a long time is what is going on in Digital Humanities." I was nonplussed; exciting research is being done in the Humanities all the time. The difference was that DH was visible in his world.

Public Relations

In order to make their positive impact known, the Humanities need to rear up on their hind legs and make some bold statements about what they are trying to accomplish. Moreover, it is likely that they need to make those statements in such a way that they will reach someone other than the choir — namely, the tens of millions of illiterate adults. A hundred years ago, Medicine was not a significant research discipline, and although doctors were valued, many were valued in terms of domestic produce such as chickens and jars of jam, much like members of the clergy. Lewis Thomas, for example, remembers how his father would celebrate if he received his entire fee immediately; the idea that anyone would enter Medicine as a means of obtaining capital wealth was laughable [Thomas 1983, 3]. A hundred years before that, the term *science* was being deprecated as an unreasonable barbarism, far inferior to the more ambitious and exalted *natural philosophy* of an earlier era.

All of which is to say that conditions have not always been what they are today. We are living in what used to be the future, and it is terrific in many ways. For example, medical research has vastly reduced the instances of cholera, and the same can be said for a wide range of afflictions, including calamities like polio, where up until less than 60 years ago, all that could be done was to stick people in a giant metal coffin that reduced the air pressure enough that they could breathe. Governments, NGOs, and the public in general may debate the high costs of health care, but no one suggests that the solution is to stop doing medical research; there are enough success stories to more than justify its existence, and the health it helps to support is recognized as important by practically everyone.

Scientific research has similarly been working miracles, from industrial systems to the Internet; hardly a year goes by without someone announcing a new kind of crop, a new device, a new material. For the sciences, however, the commitment of third parties is less secure, since the connection to personal benefit is not so visceral. I am, however, personally looking forward to having tiny little repair robots in my blood, combining science research with medical research once again to produce levels of health and vivacity that are hard to imagine here in tomorrow's past.

We find similarly remarkable advances in the Humanities, where we tend not to speak of "advances" at all. However, discourse aside, they do exist. For example, we are now on the lookout for all kinds of new perspectives that lend depth and richness to how we understand the world. What is going on, we now ask, with how this writer or that is dealing with women, minorities, the postcolonial world, the posthuman? We don't primarily seek to crunch the numbers and get an answer, but instead we try to enrich the object of study by iterative analysis and reporting from different perspectives — more like building up a pearl than climbing up a ladder. As I often put it, we are not trying to solve Shakespeare and move on to Milton; instead, every generation we have new ideas about both.

Wicked Problems, Wicked Opportunities

That very humanistic approach, of dealing with what we are studying as though it will reward continued study from all the angles we can conceive of and argue for, is a method with the potential to radically transform the world. It is at least as vital and amazing as anything going on elsewhere on campus.

One of the distinguishing features of scholarly activities in the Humanities is a focus on people: what they've done, what they think, what they've written. In practical terms, any problem involving people is likely to be, to use the term first proposed by Rittel and Webber, a "wicked problem" [Rittel and Webber 1973, 160]. They define this category of problem with the following wonderful list of conditions:

- 1. A definitive definition of the problem does not exist
- 2. It is impossible to know when it is solved
- 3. Solutions are just better or worse, not true or false
- 4. Solutions cannot by definitively tested
- 5. Every attempt at a solution changes the conditions
- 6. Possible solutions are innumerable
- 7. Each problem is essentially unique
- 8. Every problem is a symptom of another problem
- 9. Problems can be explained in different ways, and each explanation suggests different solutions
- 10. People must take responsibility for the solutions they choose [Rittel and Webber 1973, 161]

If we replace the word "problem" with "object of study" and "solution" with "interpretation," the criteria read like a list of statements about how the humanities have always understood the world:

- 1. A definitive definition of the object of study does not exist
- 2. It is impossible to know when an interpretation is complete
- 3. Interpretations are just better or worse, not true or false
- 4. Interpretations cannot by definitively tested
- 5. Every attempt at an interpretation changes the conditions
- 6. Possible interpretations are innumerable
- 7. Each object of study is essentially unique
- 8. Every interpretation is a symptom of another interpretation
- 9. Objects of study can be explained in different ways, and each explanation suggests different interpretations
- 10. People must take responsibility for the interpretations they choose

It seems clear that wicked problems are the class of problems most effectively addressed using the methods of the Humanities. Moreover, I would go further and say that the same criteria apply not only to problems, but also to opportunities. It is increasingly believed in government and industry that the problems worth addressing are wicked problems, and the opportunities are in this sense wicked too. For example, the language of the "Grand Challenge," meaning a global wicked problem/opportunity, is being used by organizations such as USAID, Grand Challenges Canada, and the Bill and Melinda Gates Foundation. Although the vast bulk of resources is currently being allocated to projects of a technical nature, the Humanities are well positioned in both theoretical and methodological terms to take the lead in understanding what is going on, which is an indispensable component of planning for a better future.

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4Humanities.com

In 2010, a leading group of digital humanists, including Alan Liu, Geoffrey Rockwell, Melissa Terras, Stéfan Sinclair, and Christine Henseler began an online collection of success stories from the Humanities. Called *4Humanities* (Fig. 2), the collection is intended to serve as a resource for anyone who is trying to make a case about the importance of the Humanities.

4Humanities began because the digital humanities community — which specializes in making creative use of digital technology to advance humanities research and teaching as well as to think about the basic nature of the new media and technologies — woke up to its special potential and responsibility to assist humanities advocacy. The digital humanities are increasingly integrated in the humanities at large. They catch the eye of administrators and funding agencies who otherwise dismiss the humanities as yesterday's news. They connect across disciplines with science and engineering fields. They have the potential to use new technologies to help the humanities communicate with, and adapt to, contemporary society [4Humanities 2010].



Figure 2. The 4Humanities website [4Humanities 2010] was organized and is run by a group of prominent digital humanists; it is a rich resource of material highlighting the value of the Humanities.

With a large collection of examples, advocacy projects, and tools, 4Humanities.com is currently and has been for some time a valuable site in the ongoing struggle for public recognition and support. However, it is also only one approach to the problems that need to be addressed.

The Humanitarium

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I have spent countless hours on family trips, school trips, and even trips with friends and colleagues to places that specialize in promoting the sciences, whether to a science museum, planetarium, discovery center, or other venue where the goal is to make science fun and attractive to children. They are usually big places (e.g., Fig. 3) and garner a lot of public support; they take at least tens and usually hundreds of millions of dollars to build, and similar amounts to operate (e.g., [Morell 2012] and [Science Museum Group 2013]). Even for those places that charge an entry fee, it is not unusual for those fees to account for less than 20 percent of the annual operating budget [Calgary Science Centre & Creative Kids Museum Society 2013, 18].

However, they have earned it. I have watched bees moving in their hive, seen someone making elephant toothpaste, started a captive tornado fifty feet high, and zoomed not just through our galaxy, but also through a universe of galaxies. It was amazing and fun, and it encouraged me, and the children I was with, to think that science was a big deal — that it was worthwhile, whether or not we would ever seek out a career as a professional part of it.



Figure 3. A map of a typical science center [Ontario Science Centre 2004, 1]

I ask myself, however, why there is no comparable interactive space — call it a "Humanitarium" — in every single city for school trips and families and members of the public who are interested in knowing more, not just about individual objects of study (although those are important) but even more so about the way the Humanities work. It might be argued that the techniques of interpretation are too sophisticated, take too long, and are too situated within the various disciplinary traditions to be of general interest. The same can be said, however, for the techniques, timeframes, and disciplinary boundaries of the sciences.

The digital humanities have already been making experiments of this kind. In the years 2007 and 2008, for example, the Humanities Computing (HuCo) MA program at the University of Alberta ran a series of activities intended for middle school students. These were not the usual students who were headed to the university from the day they were born, but instead they were students from schools where a transition to university was rare enough to be extraordinary.

One set of experiences was planned and conducted by Maryanne Wynne, and involved introducing the students to corpus linguistics, a field that in the University of Alberta is located in the Faculty of Arts. Her approach was exemplary. She began by talking about slang and how it changes over time: "What kinds of things do your parents say that you would never say, for instance when they really like something?" As the responses came in, she used the interface to one of the online corpora to show the graphs of use of the word, and how it varied between use in speaking, in writing, and so on. From there she called up graphs of words the young people used: at the time one of them was "awesome," which showed a spike in recent usage (Fig. 4).

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Figure 4. The COCA corpus showing frequency of usage changing over time for the word "awesome" [Corpus of Contemporary American English 2015].

"Now what kinds of things do people say are awesome?" and she introduced the concept of collocation, showing various lengths of word-level n-grams and how their usage had changed over time. In short order, the children couldn't wait to get their hands on the tools of corpus linguistics, which is not one of the fields that would immediately leap to mind as having an attraction for non-experts with questionable literacy. Her strategy combines several key aspects. First, she wasn't showing them a system designed for children, but instead was using the actual online tools on real data. Second, her emphasis was not on the field of study (reporting, for instance, some recent findings), but instead on the techniques. Third, she applied those techniques to material that was quite likely to get everyone's imagination engaged.

As an activity at the Humanitarium, I believe "how do people say something is cool" would go a long way to increasing public awareness of and interest in a relatively specialized and somewhat arcane part of the academy.

However, corpus linguistics is only one example. If the sciences are about understanding the physical world, and Medicine is about making life possible in that world, the Arts and Humanities are about the quality of life. A typical Humanitarium might have materials and experiences ranging from interactive displays to fun, hands-on activities in a wide range of fields, including but not limited to:

- 1. Anthropology
- 2. Art
- 3. Classics
- 4. Cultural Studies
- 5. Design
- 6. Drama
- 7. Economics
- 8. English
- 9. Environmental Studies
- 10. History
- 11. Linguistics
- 12. Music
- 13. Philosophy

- Political Science
- 15. Psychology
- 16. Sociology
- 17. Gender Studies

Another strategy for organizing the experiences of the Humanitarium is to focus, not necessarily on the existing fields of 26 study, but instead on a variety of theoretical lenses. Rivkin and Ryan, for example, list more than a dozen [Rivkin and Ryan 2010, v].

Television Programming

In a similar vein, we can imagine an audience for shows that demonstrate the core competency of Humanities 27 disciplines. In this respect, historians have done an admirable job. However, there could equally well be a series of, for example, literary theorists; in each episode, each theorist could interpret an object of public interest from a different perspective.

Although not necessarily an object of public interest, I often use Shakespeare's play The Tempest as an example, 28 especially when I am speaking with audiences from the sciences. A straightforward, naïve reading has a magician (Prospero) and his daughter (Miranda) stranded on an island. Using his magic skills and the help of some esoteric creatures like Caliban and Ariel, he arranges to reintroduce himself and his daughter into society.

However, if we read The Tempest from the perspective of a postcolonial scholar, it is quite a different story. There are 29 indigenous slaves, including Caliban, whose mother Sycorax was murdered by Prospero before the start of the play, and Ariel and her invisible friends, who were similarly captured and forced to work for a stern foreign master.

From a feminist perspective, one must wonder about the patriarchal Prospero, who has raised his daughter Miranda in 30 such an ill-informed way that she can observe the ragged, dissolute crew of the arriving ship and respond with delight: "O brave new world/That has such people in't!" [Shakespeare 2000, 72]. She is, of course, in for a surprise. The real interpretations are much more sophisticated and nuanced than these brief examples could ever be, but they serve to get the strategy across.

Public Service Announcements (PSAs)

Although they are not as common on television as they once were, nor as common in North America as in other parts of 31 the world, the PSA has a venerable history as a kind of commercial that is selling ideas rather than commodities. If the humanities and their core activities are not well known or understood by the general public, whoever that might be, PSAs could be another quick and comparatively easy form of dissemination. Whatever contemporary form they take, whether web videos, tweets, blog posts, or any other media, the principles are the same: keep them short, simple, and friendly.

As an example, I worked with Milena Radzikowska, Gerry Derksen, and others on a series of one-minute video clips about design research projects. Design research is another area that is not well understood by the public, and can benefit from increased dissemination. We have therefore been briefly summarizing projects like pill identification, visualization for decision support, and conversational modeling. However, there are also short videos about a variety of DH-related design research projects, such as the mandala browser, bubblelines, and the dynamic table of contexts [IIT Institute of Design Vimeo Channel 2014]. Unfortunately, as in all marketing efforts, it is nearly impossible to judge the impact of a single project. All we really know is that some people have watched them, and with more promotion, more people might, and with every viewer, we have extended awareness of what design research is like.

Conclusion

Public relations have not been a central concern for the Humanities, for several reasons. First is the cost of marketing and promotion, which is not easily justified in an area where core programs have already faced decades of budget cuts.

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Next is the nature of the activity being promoted. Since one of the primary purposes of the Humanities is to multiply valid interpretations, the ground is constantly shifting, not in an accidental or secondary way, but instead as a central practice. Changes in perspective are core to the Humanities approach to creating new knowledge (or improved understanding, as you prefer), and so any promotional activity faces the challenge of not having a fixed object to promote. From the perspective of the people whose work is being promoted, the fundamental necessity of troubling any assumptions being made also creates a challenge. The simplification process that is often necessary in creating a public message is inimical to the kind of nuanced understanding that Humanities researchers see as the point of the enterprise. From the marketing perspective, this can appear as an incessant tendency to quibble. Possible workarounds might include highlighting debates rather than outcomes, and including dissenting viewpoints in sidebars or footnotes to the promotional materials.

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To complicate matters further, the accumulation of widely-accepted perspectives takes place over long stretches of time, with validation processes carried out in discussions that rely on publication cycles that take years for each carefullycrafted statement to be made. Occasional media-genic moments, like Lancashire and Hirst [Lancashire and Hirst 2009, 1] using text analysis to diagnose Altzheimer's disease, are amazing and wonderful, but also extraordinary; they cannot be construed as representing a general program of action. This is less a criticism of the Humanities than it is of the capacity of the media to cover work that does not easily produce press releases.

Another factor is that the value of the Humanities has largely been assumed to be understood. However, the allocation of resources over time argues otherwise. As shown in Figure 1, above, research funding in the U.S.A. from 2005 to 2012 (adjusted for inflation) increased on the order of \$5 billion each in fields such as medicine, biology, and engineering, while remaining more or less fixed in the Humanities [American Academy of Arts & Sciences 2014, 4]. Admittedly, this is hard to judge from the graph, since the Humanities allocation is nearly invisible to begin with.

We also live in a world that is increasingly undereducated, not only in the sense of people not attending school, but also in the decrease of general education in favour of early specialization. At my current university, it is possible, by focused selection of electives, for undergraduate students in one of the technical departments to take virtually no courses outside their major. So the time may have arrived for the development of public relations campaigns, whether in the form of new television or online programming and dedicated channels, the establishment of Humanities discovery centers, or the expansion of the application of humanities approaches to a larger range of cultural production, including business and government. The Digital Humanities have already been active in pursuing this agenda, and in that respect provide an opportunity and challenge to the traditional Humanities and their concerns. However, a great deal more remains to be accomplished.

Notes

[1] I note that here and throughout, I use the term "Humanities" to mean Arts and Humanities, and in some cases also Fine Arts and Social Sciences, recognizing that there is some disagreement among institutions of higher education about which disciplines fit where.

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