# **Integrative Platforms for the** Humanities

By Poul Holm

**Knowledge integration is key to advances in research and the digital revolution is providing masses of data. Yet, humanities research suffers from disciplinary and institutional confines that preserve knowledge silos and perpetuate analogue research practices. I propose that Integrative Platforms may help overcome these constraints.**

Despite persistent claims to the contrary the humanities are not in crisis. The picture that emerges from a recent report based on interviews with a large number of humanities scholars is that they are deeply committed to the social value of their work and appreciate the long-term importance it has for addressing global challenges.[[1]](#footnote-1) Humanities disciplines show vitality and alertness to new topics and methods. It also emerged that institutional structures reflect questions asked in the past and that therefore historical contingency often determine the support structures for research. What this means is that proponents of new lines of investigation not only need to be good researchers but that the success of new ventures often depends on organizational and lobbying skills. While obstacles will always be in place it may be fruitful to consider if lines of research inquiry may be furthered by other support structures than those traditionally in place.

## Molecular biology lessons?

In the 1960s biology broke through to the study of molecular life. However, advances within the discipline were not as quick as pioneers expected. The delay has been explained by the fact that molecular biology did not require “big, complex and expensive equipment like high-energy physics. European governments therefore lacked the incentive to pool their efforts and to build together a supranational laboratory ‘modeled on CERN’.” Historian of science John Krige argues, however, that this account overlooks resistance within the discipline itself. Leading figures of the field wanted to pursue national institutional avenues first, and indeed felt that a European focus might “drain human and financial resources away from incipient or planned programmes in universities and national research centres”.[[2]](#footnote-2)

In a similar way it is often maintained that the humanities do not require large-scale facilities and indeed because of the national agenda of much research and its connection with university teaching is best conducted in university departments.

I agree with these observations but I do think there is merit in considering if in addition to such disciplinary and institutional foundations there would be added benefit from undertaking larger investments at the supra-national scale. The arguments in favour would be the same that paved the path for EMBL, namely that (a) bigger (perhaps comparative) projects might facilitate new risky research questions and (b) provide a social network to help overcome what Ulrich Beck and Natan Sznaider have aptly named methodological nationalism.[[3]](#footnote-3)

When eventually the European Molecular Biology Laboratory was set up in the 1990s it did become an immense boost to the field, not least by providing a focus of research programmes and by training a new generation of the very best young scientists who became exposed not just to the leading scientists of the field but endowed with a network of colleagues for their future career. EMBL today consists of 85 independent research groups and 1,760 employees from 60 nations who come from such disciplines as biology, physics, chemistry, and computer science. EMBL provides a host of training opportunities for [PhD students](http://www.embl.de/training/eipp/index.html), [postdocs](http://www.embl.de/training/postdocs/index.html) and [visiting scientists](http://www.embl.de/training/visitors_scholars/index.html) and provide [Core Facilities](http://www.embl.de/services/core_facilities/index.html) that are expensive to set up or maintain. Again, there is nothing in this that would be alien to advanced humanities research needs today. The only difference is we don’t have them.

To meet these aims the *Humanities World Report* proposed ‘Integrative Platforms’ as a possible new avenue. Let me now try to put more flesh on this skeleton of an idea.

## Why do the humanities need integration?

In one sense the humanities like all quests for knowledge have always needed integration. Karl Popper said it aptly: “We are not students of some subject matter, but students of problems. And problems may cut right across the borders of any subject matter or discipline.”[[4]](#footnote-4) But it is also true that new approaches to fields such as cognition, environment, medicine, visualization, etc. have dramatically opened new emerging research fields and methods which rely on integrative approaches.[[5]](#footnote-5) In the *Humanities World Report* we sum up these developments in this way:

[…] digital methodologies enable researchers to draw on and collate data of multiple origin and form. New approaches have given rise to multi- and interdisciplinary fields such as cognition, medical humanities, environmental humanities, etc. New uses of humanities research are also helping to integrate scholarship and other types of knowledge, e.g. as now occurs in the use of historical data for public planning, of narrative models for business, of arts technology for media, and of philosophy for bioethics, etc. Furthermore, long-standing disciplines such as languages, literature, history of ideas, etc., are becoming ever more important to overcome cultural borders in a globalizing world.

Conventional wisdom is that technology and scientific discoveries are the main drivers of modern societies. The underlying assumption of the humanities is quite the opposite – we as humans are driven not by what we eat but by what we *want* to eat. The thought, the intention is primary to human action. The human (and social) sciences deal with the most powerful driving force of all: motivation. We humans are driven by aspiration, by fear and hope, and we rationalise our acts by telling stories. In rapidly changing times, our chances of survival depend on confidence and sense of direction.

Traditionally, the role of the scientist is to measure and understand the world. We may offer advice but choice is best left to the politician. The humanities often think of themselves as quite distant from or indeed decoupled from the political process. That defining line between science as an observational platform and human agency is challenged now by changes both within the scientific process itself and by changes in the world around us.

For good and bad the 21st century is characterized by design supplanting tradition. We question, redefine and reshape processes and products by choosing elements of disparate origin and context. This design thinking provides us with hitherto unknown freedom, room for creation and widening horizons. The flipside to a design-based rather than tradition-based society is a constant fear that we ourselves and what we believe in may be made redundant and emptied of meaning and purpose. Globalised societies have experienced a backlash of resistance to change and immigration. Indeed, we see entire religious systems such as Islam being redesigned to drive the forces of Islamic State into a dream world of a seventh-century caliphate using 21st century media. The ability of a society to grasp these challenges of creativity, sustainability and inclusiveness are becoming ever more critical to economic, social and cultural survival and growth.

These challenges provide a new role for the university both as an interpreter of change and a source of innovation. The arts, human and social sciences are part of both sides of the coin – but the novel aspect is that those who master the elements of design are the winners in the designer society. It no longer suffices to be an economic and technological expert. Hard work remains an essential ingredient of economic success. But we have long since come out of the Industrial Age, and competitive edge depends less on producing boxes than designing what’s in them and even more intangibly how we organize ourselves and communicate. We need therefore to harness all the knowledge available to us. Nevertheless, the one resource, which is still relatively untapped, is the humanities. A focus on humanities-led knowledge integration may therefore bring high gains not only to knowledge production but to society at large.

## What is an integrative platform?

Integrated platforms are known in fields such as business and learning. In the world of big data Integrated Digital Platforms are key to collecting and analyzing marketing trends and patterns. Similarly, integration across media has allowed for services to be provided across the Internet on multiple mobile end-user products. In the world of education Integrative Learning is a theory that helps students make connections across curricula and develop multidisciplinary understanding.

An n-gram[[6]](#footnote-6) search for the compound ‘integrated platform’ reveals that the word-pair began to be used frequently in computer science around 1990. It was then defined as an Expert system which “serves as a front-end toolset with knowledge representation in the Expert System knowledge base which is linked to the object representation in the CASE [Computer-Aided Software Engineering] encyclopedia.”[[7]](#footnote-7) Front-end toolsets were developed in the 1980s to “bridge the traditional communication gap between user and analyst”. However, toolsets often revealed new problems such as either a highly restrictive toolset or a methodology-independent toolset which, when coupled with a lack of standards, might result in disaster. Slusky and Partow-Navid therefore defined the objective of building Integrated Platforms as to advise IT specialists on business needs and methodological solutions by substantial interaction with users. The means to the goal according to them was to add necessary information, eliminate contradictions and vagueness and refine and hone the scope and limitations of the problem.

Expert systems have come a long way since then but the challenges identified have certainly not gone away. For the humanities the language of Slusky and Partow-Navid may sound alien but it may be useful to consider some potential implications of their discussion. It is certainly not an alien thought to the humanities to add “necessary information, eliminate contradictions and vagueness and refine and hone the scope and limitations” of a problem, nor is interaction with users (be they academics in other disciplines or end-users of humanities insights). And yet, I would hold that in the present academic set-up we suffer huge opportunity costs because of a lack of integration of methods and insights and lack of translation to users of knowledge within and without the humanities.

## What is needed of an Integrative Platform for the Humanities?

An Integrative Platform for the Humanities would go beyond the limited scope of research projects and humanities centres. In the words of the *Humanities World Report* the crucial characteristic would be that a platform brings

…together experts from all fields of science and scholarship to identify, review and develop current knowledge […] and to identify what we know and what – given a large effort of money, collaboration, methodological improvement and theoretical honing – we might know. […] They should aim to lower the barriers between the human, the social and the natural sciences; multiply the learning capacity of many excellent research environments; and enable knowledge transfer and co-production among researchers and other societal actors. Moreover, the transnational structure of such platforms, and the reflective processes of working groups, would develop new best practices for global humanities research.[[8]](#footnote-8)

In the most positive reading the present EU policy for research, the Horizon 2020 programme, foresees mainstreaming the social sciences and humanities (SSH) across all Societal Challenges in order to draw on insights into human motivation, behaviour, policy and action. To my mind what is lacking is a clearer articulation of how under-utilised SSH disciplines might be brought to bear on the grand challenges. To that end it may be helpful not just to talk in the broad term of SSH. It is clear that some disciplines will get most of the H2020 funding for SSH while many other disciplines will simply miss out. In the fields of food and environment, disciplines such as economics, law, cognitive sciences and some parts of sociology will get at least some funding. These disciplines have a track record of EU funding since at least the 4th Framework Programme. On the other hand, the new perspectives of human environmental studies are completely ignored (geography, history, literature, art studies). They address basic questions of human motivation and behaviour, and literally include thousands of scholars in Europe. Most of them are totally disconnected from H2020 and will only be reinforced in their sense of detachment by the new work programmes.

The present lack of integration of knowledge from the full spectrum of the human sciences in order to address the main societal challenges represents a waste of insight and is detrimental to societal development. I propose therefore that Horizon 2020 – or sympathetic private funders – create Integrative Platforms as spaces for the networking, capacity building and preparation of interdisciplinary and transdisciplinary projects, helping to bring together experts from all fields of science and scholarship, to identify, review and achieve knowledge breakthroughs.

Integrative Platforms should help lower the barriers between the human, the social and the natural sciences; multiply the learning capacity of many excellent research environments; and enable co-production of knowledge, as well as knowledge transfer and uptake, among researchers and other societal actors. A Platform may begin as a virtual entity but I believe – again based on the lessons of EMBL – that one or more physical entities are ultimately needed. The transnational structure of such Integrative Platforms, and the reflective processes of working groups, would surely establish Europe as a global humanities leader.

## How it might work

How might one such European research project look like? I firmly believe that research projects must be the result of bottom-up, curiosity-driven research and therefore should not be predicated on a narrow policy process. On the other hand, in order to give some substance to the idea it may be useful to come up with one example.

The field of environmental humanities is a likely candidate. In the last decade or so, European historians, literary critics, philosophers, etc. have flocked in their thousands to study the nexus of humans and nature in new and promising ways. As climate change is happening scientists may debate measurements and trajectories but at the heart of the research challenge is how we as a species may be able to live with environmental change and in so doing change behaviour to more sustainable lifestyles on the global scale. This is at heart a humanistic problem – a challenge that calls on all the humanities disciplines that deal with human motivation and adaptation.[[9]](#footnote-9)

A first trial of an Integrated Platform might therefore be a call to establish a Platform for Human Action and Environmental Change. The aim would be to channel expertise from the human and social sciences by confronting societal, cultural and governmental framing of, and responses to, environmental issues. It would be an experiment in social innovation for those humanists who are willing to collaborate outside their zones of comfort to bring their expertise to bear on an agreed research agenda. An Integrative Platform would enable Europe to capitalize on its first-mover advantage in conceptualizing the relations among social justice, global change and environmental challenges. An Integrative Platform would also support co-production of environmental literacy in order to improve societal resilience in the face of environmental change. It would provide a training facility for doctoral students, postdocs and early-career researchers working in a number of research groups on human perception of and living with environmental change.

Other likely candidates for integration might be questions of human cognition or language. The cognitive sciences have made huge strides forward and generated major challenges for humanities disciplines such as philosophy and education. Linguistic research similarly has made huge strides forward in collaboration with computer science, archaeology, genetics and many other disciplinary approaches. The bottom line is that so much more could be gained by a large-scale effort.

## Conclusion

Australian physicist Michael Nielsen states it clearly: "We are living at the dawn of the most dramatic change in science in more than 300 years. The Internet is transforming the nature of our collective intelligence and how we stand in the world.”[[10]](#footnote-10) In his view we are only at the threshold of taking the leap from analogue to digital research methods. His concern is with the natural sciences and I have proposed here that our concern should be no less with the humanities. Methodological advances – many based on digital tools – and conceptual breakthroughs are placing ever more emphasis on the need for humanities both for knowledge and for the safe future of our societies. That is why we need to scale up funding for the humanities in a way that creates radically trans- and interdisciplinary research environments.[[11]](#footnote-11)

Contrary to what is often said, the humanities are *not* cheap. We need manpower as much as the sciences and we need the equipment and facilities as much as the sciences. We do not need a CERN-like investment – but then again nor do most of the sciences. We do need flexible funding conditions, a focus on senior researchers to deliver, and training of junior researchers with a view to the needs of academic research by the mid-twenty-first century. We need to integrate intellectual energies and resources right across the humanities, in a way that reaches out to disciplines and society beyond. The bottom line is that existing and emerging disciplines will benefit from social innovation of research environments such as Integrative Platforms.

1. Poul Holm, Arne Jarrick & Dominic Scott, *Humanities World Report 2015* (London, Palgrave, 2014). [↑](#footnote-ref-1)
2. John Krige, The birth of EMBO and the difficult road to EMBL. *Stud. Hist. Phil. Biol. & Biomed. Sci.* 33 (2002) 547–564. [↑](#footnote-ref-2)
3. Ulrich Beck & Stefan Sznaider, Unpacking cosmopolitanism for the social sciences: a research agenda. The British Journal of Sociology 57 (2006), 1-23. [↑](#footnote-ref-3)
4. Karl Popper, *Conjectures and refutations: the growth of scientific knowledge,* London: Routledge & Kegan Paul, 1963, p. 88. [↑](#footnote-ref-4)
5. Poul Holm et.al., *Emerging Trends in Socio-economic Sciences and Humanities in Europe. The METRIS Report.* Luxembourg: Office for Official Publications of the European Communities, 2009. [↑](#footnote-ref-5)
6. Jean-Baptiste Michel\*, Yuan Kui Shen, Aviva Presser Aiden, Adrian Veres, Matthew K. Gray, William Brockman, The Google Books Team, Joseph P. Pickett, Dale Hoiberg, Dan Clancy, Peter Norvig, Jon Orwant, Steven Pinker, Martin A. Nowak, and Erez Lieberman Aiden. ‘Quantitative Analysis of Culture Using Millions of Digitized Books’. *Science* (Published online ahead of print: 12/16/2010). [↑](#footnote-ref-6)
7. Ludwig Slusky & Parviz Partow-Navid, ‘CASE and Expert Systems Integration Issues’. In: T. J. Bergin (ed), *Computer-aided Software Engineering: Issues and Trends for the 1990s and Beyond* (Harrisburg/London, Idea Group Publishing, 1993) 361. [↑](#footnote-ref-7)
8. *Humanities World Report 2015*, 191. [↑](#footnote-ref-8)
9. Poul Holm, Anthropocene humanities. Jane Conroy and Margaret Kelleher (eds.), *Restating the Value of the Humanities.* Dublin, Humanities Serving Irish Society Consortium, 2014, pp 8-11 [↑](#footnote-ref-9)
10. Michael Nielsen, *Reinventing Discovery. The New Era of Networked Science*. Princeton University Press, 2011. [↑](#footnote-ref-10)
11. Poul Holm, Michael Goodsite, Sierd Cloetingh, Bernard Vanheusden, Kathryn Yusoff, Mauro Agnoletti, Moldan Bedřich, Daniel Lang, Rik Leemans, Joergen Oerstroem Moeller, Mercedes Pardo Buendia, Walter Pohl, Andrew Sors and Ruben Zondervan, 'Collaboration between the Natural, Social and Human Sciences in Global Change Studies'. *Environmental Science and Policy*, 28, 2013, pp 25-35. [↑](#footnote-ref-11)