7
Funding and Infrastructure

This chapter is concerned with the questions: Is funding for the humanities adequate? Do we have adequate infrastructure for humanities research? Are the institutional parameters of the humanities fit for the challenges of the 21st century? The chapter will not look into general questions of university frameworks, relevant as that would be, but it will focus on the perspectives of humanistic researchers themselves, as evidenced by our interviews, and how they experience financial and infrastructural support for their research and how these are conditions changing. Not surprisingly, we found that there are huge levels of inequality within the world of the humanities and that different regional funding systems, even within the developed world, may have hitherto neglected consequences for humanities research practices.

Core funding for research

By far the majority of interviewees came from publicly funded universities and, while many identified other sources of funding for research, the role of state financing was clear in all continents. We had representatives of a few private universities with large endowments, all of them North American.

All interviewees were asked to give their view of recent changes in the budget situation for the humanities for their university. Because of the financial crisis of the last years it might have been expected that many would report declining funding levels, but this was not the case. Only seven interviewees reported a decline in overall budget (two Europeans, three Africans, and two North Americans). No change was reported by 25 respondents, with some indicating that, while some revenue sources were declining, others had evened out the loss. Positive changes were

noted by 13 (four Asians, four Russians, two Latin Americans, and one each from Europe and North America). Half our respondents, 43, however, did not express a view on change. The non-respondents were evenly spread across countries that had experienced positive and negative growth.

These responses should not be taken as an accurate reflection of the funding situation for the humanities. While some of our respondents were in positions of budgetary insight, others responded simply from their own experience. What we can say, however, is that the perception of our interviewees was one of relative stability and maybe even some improvement globally. Our interviewees certainly did not indicate that funding for the humanities had been dramatically cut.

The overall picture of relative stability changes, however, when one looks at individual countries. In some regions, such as the Mediterranean countries, cuts have been severe and are reported by our interviewees, and in some North American universities state funding and some endowments have declined badly, similarly noted by some interviewees. In other countries, most notably in China, Brazil and Russia, budgets for the humanities have gone up quite perceptibly and in some cases even dramatically.

Notions of relative stability depend, of course, on the absolute level of funding. While the interviews did not indicate that humanities in African universities had experienced an adverse trend in recent years, the level of funding was a problem in itself:

(Af8) As in many African universities funding brings many challenges. During the post independence period, UEM was mainly funded for research by Nordic agencies, such as SIDA/SAREC, the Ford Foundation and other agencies, and the government of Mozambique. Since the mid-1980s, and particularly after the 1990s, funding became a huge problem. Government funding covers, with difficulty, teaching activities, salaries and some other institutional support, but very few research programmes. The situation is particularly difficult for young scholars that have to face a lack of books and of research and teaching material, a lack of funds to participate in conferences, and a lacking of funding to publish their work. Publication is a problem at the university. Firstly, because many scholars teach in different (private) universities to earn some money, as the salary at public universities is not sufficient, or serve as consultants, with no time to undertake research; secondly, with a lack of funds to do research we have very few incentives to research and publish.

While South Africa has an advanced university system the legacy of apartheid is still felt in formerly black universities, which struggle with huge number of students and are really teaching universities (Af13).

The evidence from Africa reveals government pressure on universities to raise their income by other means than taxes, such as in this case from an East African country:

> *(Af3)* The government has been the primary funder of public universities, but its funding is gradually declining and universities are expected to raise more from student fees, research income and from other income-generating activities. These might, for example, involve providing particular services or facilities to the local community.

This experience is a far cry from that of Chinese colleagues who reported that funding has been steadily rising for the last five years by about 15% per annum (As16). With increased funding comes problems of transparency as to which subjects and disciplines get the lion's share. Such problems are elucidated by evidence from Russia, which has also seen increased levels of funding. In an attempt to boost the research capability of Russia's best universities, the Federal Ministry for Education and Research devised a vertical hierarchy of institutions of higher education. At the top are federal and research universities, each with a federal development grant (Rub 1 bln/year in 2010–14). This money was to be spent according to a development roadmap (R6). According to our interviewees the humanities have seen little benefit from this investment. The main issues seem to be a lack of transparency for the majority of funding, which is retained at the discretion of central authorities, and an over-emphasis on rewards for publication in peer-reviewed journals and the use of citation indexes. Most humanists publish in Russian and receive little benefit from this system. Another possible funding source is the European Union:

> *(R2)* However, our managers also encourage us to find additional financial support for our research from foreign sources (European especially), probably because they see it as a way for internationalisation of the University.

Funding may be tied very directly to political favour. The Russian Presidential Academy and the Higher School of Economics in Moscow are two of the major political players among Russian universities. They were established during the first years of reform and, according to our

interviewees, were seen as a liberal ghetto during the first decade of Putin's government. In recent years they have received political credit to host important and well-funded think tanks for economic reforms. These resources were allocated for a series of new departments and research centres, including for philosophy and sociology. However, such favouritism may prove short-lived and potentially difficult to balance with academic freedom.

The Taiwanese system represents another extreme where funding has been stable for half a century and little incentive is evident for the humanities to be more enterprising:

> *(As14)* Our funding comes from Taiwan's Ministry of Education. However, some of our applied fields, like engineering and business, get a lot of feedback money from their alumni. Besides such donations and support, the colleges of engineering and business will engage in a lot of industry–academy collaborative work. Thus, they can get funding that would never be available to the humanities programme. The extra money that the humanities programmes get tend to be the research grants that the professors receive from the National Science Council or else from cooperative research projects, either locally or internationally funded by various sponsoring organisations. But, I think our humanities colleagues and programmes have to start thinking more deeply about how to increase their financial resources so that they can offer more in their programmes. It's been the same model since day one, I guess, for 50 or 60 years. The principal funding always from the Ministry of Education, that's why we're not so enterprising.

In the United States the funding models are quite diverse, with public universities relying on state grants and tuition fees to varying degrees, while private universities differ according to their historical portfolio of endowments and attractiveness to donors. The financial crisis of recent years has hit some universities badly while others have been insulated against adversity. One interviewee described the situation at a large private university, which was highly dependent on tuition and had a limited endowment.

> *(NA6)* I was chair of the department from 2008–12, right when the great recession hit, and it was quite a hit. My first year as chair was spent dealing with mandatory furloughs for faculty and staff, a 20% targeted cut in soft money and structural funds that primarily funds TAs and lecturers

Another interviewee at a very well-endowed university talked about the implications of imminent changes to the federal budget:

> *(NA5)* Just this morning, we (the other deans, President and Provost) were talking about the potential sequestration issues. If sequestration kicks in, the trickle-down for us will be substantial. If core departments in the sciences lose money, the humanities will take a hit because of the science and engineering emphasis, in perhaps a disproportionate kind of way. … this would mean a loss for everyone.

However, in this case the outlook for the university might still have been relatively stable as funding from foundations and alumni was pretty steady: 'Down in 2008, but basically back where it should be. We don't live on our tuition the way other universities do.' (NA5)

Non-governmental funding in developing countries

A host of private and semi-private international funders play a very important role for some developing countries. In developed countries such foundations may also play an important role for certain areas, but will typically play a much lesser role for the research budget in total.

Outside private funding may be controversial with some governments. Western donations were crucial for the establishment of the European University of St Petersburg, and a few other initiatives in Russia in the 1990s, but this legacy was seen as highly suspect by the Putin government and foreign funding streams have now effectively dried up. Therer was a similar situation in parts of the Middle East before the regime changes of recent years:

> *(ME4)* Under the previous regime it was forbidden to get funding from abroad (except for scholarships). All funding had to come from national public sources.

In most developing countries foreign research donations are welcome supplements to core funding. Public and private donors often collaborate directly or through the African Humanities Program. Staff training is mainly supported by national governments but receives valuable aid from various consortia, including PANGeA (Partnership for African Next Generation of Academics), and several links programmes in languages (Af5). In many countries donors such as the World Bank, EU, UNDP and national aid agencies work directly with local government and agencies.

However, for humanities scholars access to such programmes is not easy and depends on the scholar's abilities to establish international links:

> *(Af1)* Rare, but done. In 2008, I became part of a Volkswagen Foundation research network, which acts as a research hub connecting German (Freiburg), Swiss (Basel) and African (Bayero, Yaoundé and Witwatersrand) universities.

Such breakthroughs are limited to a few scholars:

> *(ME1)* Since 2000, I have received some EU funding that's dedicated to the Mediterranean region. In some cases I work on aspects of funded projects. There are many such projects funded by the EU. Their objective is to create networks in the Mediterranean. EU states need a non-EU partner to apply for such projects. Another source from which I have obtained funding is France's Institut de Reserche pour le Développement, also the American University of Beirut. In such cases I tend to be approached, rather than making the approaches myself. Since most [Arab nationality] don't speak English, they can't access these sorts of funds, so they concentrate on teaching. In this sense, I'm in the minority.

Access to funding may depend on access to colleagues who do have such international contacts:

> *(Af7)* My research is largely supported by funding received from partners as part of collaborative projects. In some cases I do carry out self-supported research because in my field as a historian it is possible to do archival research without large sums of money.

Competitive funding streams in developed countries

Since the 1970s most governments in developed countries have gradually increased a third funding stream of competitive funding administered by research councils or directly through ministries. The funding model was often found in the United States, which introduced the National Science Foundation immediately after World War II to develop the sciences. The National Endowment for the Humanities was funded to a much smaller extent and today plays a relatively small role. In many west European countries, on the other hand, humanities were seen as part of the sciences and shared a considerably larger portion of the

total research funding made available through this competitive funding stream. With the development of the European Framework Programme for Research and Innovation, EU funding is now playing an increasing role, also for partner countries outside Europe.

Not surprisingly, European interviewees identified research agencies as crucial funders, although they often change their guidelines:

> *(E12)* Research Council funding is always developing its focus and nature, and we have been challenged to keep up. The most recent developments have encouraged collaboration, longer, larger projects, and the demonstration of impact, which have all moved the emphasis away from the lone scholar model of research that many of us were familiar with up to the turn of the century.

National research agencies in Europe have increasingly focused on excellence programmes of various sorts, which diverts more money to a few elite universities, not least in Germany:

> *(E2)* German universities have not seen drastic funding cuts comparable to what happened, for example, in the UK, although the situation differs among the various German states. The state of Baden-Württemberg is relatively prosperous and hosts several of Germany's most prestigious universities with great traditions in both the sciences and the humanities, including Heidelberg, Freiburg and Tübingen. Moreover, in 2005 the federal government launched the, so-called, competition for excellence that brought several billion Euros to the successful applicants. ... Moreover, the state government has invested considerable amounts of money to improve the teacher–student ratio in large departments such as history. Basically, the funding situation of German universities varies according to two factors: the state of public finances in the respective states and the ability to acquire third-party funding.

Another German interviewee confirmed this picture and drew attention to the risk that temporary funding leads to an increasing number of temporary jobs and that young researchers are finding it difficult to establish themselves:

> *(E15)* Over the last decade, funding continues to come mostly from particular states (*Länder*), and this source of funding has remained steady. But third-stream funding (*Drittmittel*) has been

increasing. Third-stream funding supports research projects (as *Sonderforschungsbereiche*), which attract, for the most part, postdoctoral researchers. But there is now a surplus of these, i.e. people who will not find permanent university jobs but will only get jobs on such projects. When I was for the last time involved in such a project, I only took PhD students as collaborators, so as not to create still more researchers who would not get permanent jobs.

The big money allocated through competitive grants is seen by some interviewees as alien to the research environment of the humanities as it forces researchers to team up:

(E5) The overall change is that more funding for research in general is in the competition stream…there is a move towards more strategic research and also there is a move towards more technological research. It means that the humanities will ultimately be seen as an aid to other types of research; those more technically orientated, more research on health topics and so on. Life sciences and, of course, climate change are another two major areas. Also, it's one of the big winners in the battle for strategic money, so the humanities have more of a struggle to have a position that researchers can compete on. It's not that there's less money for humanities research but it's within this overall stream of this competitive stream. There's less of a position for the humanities in general to even enter a competition. In order for this to happen you have to have a window of opportunity; you have to have had something that will be relevant for humanities researchers.

One interviewee made a strong plea for block government funding for research as against competitive and private funding. The interviewee was from an affluent non-EU country that had retained a strong block funding system. The argument put forward was directed against a perceived American funding model but seemed also to go against the European funding model:

(E14) Private funding remains rare and sporadic. I hope it stays so, because private research provides advantages, but it is not a perennial source of funding. Research funded by private institution is usually short-term and its results have to be produced at an unsuitable pace. Therefore it seems very important to me to keep a majority of state funding for our research so that we can be free to decide how to

conduct it and for how long. Besides, this allows our chairs to be more stable and unthreatened, contrary to what is happening in many US universities. Research in the humanities covers different aspects from the kind of research funded by private institutions. It is worth noticing here that private funding favours interdisciplinary and collective research, which is less suitable with what we used to do in the humanities. Moreover, it is important to keep some mono-disciplinary and individual research, even though interdisciplinary research is not to be rejected.

A Brazilian interviewee noted the same resistance to collaborative work, but in this case the opposition was identified not in the research community but in a conservative funding system:

(LA1) One change that could be pointed to is the search for private funding or partnerships, specially among natural and applied sciences. The humanities are still controlled by the dominant view that to remain independent and critical one cannot be subject to any funding outside the public ones. And those are controlled by a few networks of people that tend to reproduce the same patterns and knowledge already acquired, and prevent innovation.

Despite such resistance another Brazilian interviewee had found increasing opportunities to develop large-scale projects because of the overall increase in higher education funding and overheads on collaboration with the private sector (LA2).

The Australian funding model similarly relies overwhelmingly on block grants, though the role of research agencies is considerable:

(Au1) In Australia, humanities research is almost all funded by the federal government (although there are also opportunities for collaboration with local bodies, e.g. Newcastle City Council might part fund a project on local history). My university receives some research funding as a block grant, determined by a range of research indicators. There are also grants available from the Australian Research Council (ARC) through the Discovery Projects Scheme. I'm working on one of these at the moment. The block grant is not being reduced that much, though priorities are changing as universities look to fund research that will be seen as more strategic or marketable (depending on conditions). The ARC grants are not in decline, though the chances of being successful in the SSH continue to be about one in five.

The last comment reveals that funding chances in Australia seem considerably better than in Europe, where success rates for both European and national funding for humanities projects are often less than one in ten. Another Australian respondent confirmed that government research funding has been good:

> *(Au3)* It tends to fund much more pragmatic, problem-based projects. So I don't think I've ever directly got funding for one of my monographs on, say, [unclear]. I have had large funding for youth cultures of obesity, that sort of thing. And I've always encouraged my colleagues to think about it in those ways.

Some south east Asian countries have introduced research funding agencies on the European model in recent years. However, funding has come with an increased burden of bureaucracy:

> *(As13)* The problem is not so much lack of funding. But the major obstacles are the endless paperwork the professors are required to do, mostly in the name of accountability. They are mostly written prop-ups of quantities to fulfil government targets or outputs.

Such complaints are often heard in Europe and seem to be inherent in the current funding model.

Despite differences in funding models there seems to be a trend towards larger collaborative project funding in both Europe and North America. One interviewee put it this way:

> *(NA6)* Funding has been very good, partly because I'm in the digital humanities field. I've been pushing my colleagues to apply for more collaborative-scale research grants. The grants for scholars for monographs keep going down. The future of research funding for the humanities in the US lies in collaborative grants, projects, activities. Spinning off individual projects before and after. Having said that, the collaborative grants in the humanities are modest in scale and subject to fees and overheads. If the institution is going to take 50% off of a grant, it often leaves you below the threshold of sustainable activity….I like to tell junior colleagues that grant writing and organising research projects is new normal. Collaborative project work based on grants doesn't take away from research but it spurs your own research, talks and classes. Your independent work can also get channelled back into the collaborative work. One kind of activity spurs the others and vice versa.

Research institutes

While funders may have increased the pressure on the humanities to develop larger research teams and adhere to certain research metrics, universities themselves have developed humanities centres and institutes that often put emphasis on the individual scholar and provide a sheltered research environment. The model originally emanated from the Institutes of Advanced Studies (IAS) such as developed at the Princeton IAS and later also in Europe and Japan. The IAS model was developed to cater for researchers from all university disciplines but perhaps proved especially attractive to the humanities and social sciences. In the 1970s the first humanities centres were established in the United States and, particularly in the last two decades, the global Consortium of Humanities Centers and Institutes (CHCI) has grown to about 180 member institutions. With proliferation the model has changed and many centres now see themselves taking a leading role in certain interdisciplinary fields with an emphasis on grand challenges and teamwork. However, this statement by a director of a humanities and social sciences institute in Asia does capture much of the ethos of such centres:

> *(As7)* I think the most important thing for an institute such as this is to create a social ambience. Create an atmosphere where you can think a lot.

Space is often at a premium in the humanities. Academics most often have an office or cubicle but there is little or no room for meetings and workshops:

> *(NA11)* Literally, we need spaces to have events and meetings. And there is not enough space. Just to get six people in a room is a headache and an energy suck. Partially so busy, so much going on. When something goes on, there's a constant distraction. People feel scattered. Getting people together and especially sustaining meetings over a term – that is the biggest challenge. Getting the same three to four people together on something for a semester is a pain. I'm not sure if that qualifies as infrastructure, but it is a problem of mechanism or something.

In these conditions it is easy to see why a humanities centre may come as a relief, even if it offers no more than what would count as a break

out space in a science lab. The availability of such places of refuge is also precarious at times of financial stress:

> *(NA10)* In the last two years, our funding has been very rather dramatically cut. This was part of a set of cuts that all centers and institutes in the College of Liberal Arts underwent. We're located in the College of Liberal Arts, even though we're supported by the university as a whole. In those cuts, we went from being supported by the college to being supported by endowments. We lost a full-time program administrator, which was a huge loss. My only staff right now are hourly employees, mostly students.

The same centre did have its own resources but they had been donated for specific purposes:

> *(NA10)* The endowments were primarily designed to bring visitors to campus, so that has affected our ability to provide the kinds of programming we were able to do in the past. Our funding is primarily restricted gifts. But I think we are in a point where we can start building up again.

Another director reported that in the UK some institutes have a precarious funding position. For instance, two were closed down soon after being established because of the financial crisis. Of those now existing some are required to generate funding through grant applications for projects. The director was, however, optimistic about the future:

> *(E9)* Approximately 50% of our funding comes from an endowment, 50% on an annual basis from the College of Humanities and Social Sciences. The latter has remained relatively stable (though, because it has not increased with inflation, it has declined slightly in real terms). The income from the endowment suffered along with the fall in the stock market after the financial crisis; it has recovered slightly since. There's also a third stream of funding, though it varies greatly from year to year. This is funding from foundations to support particular themes or visiting scholars, e.g. Leverhulme, Carnegie and Mellon. For instance, we got $150,000 from the Mellon Sawyer Seminar scheme recently, to run a series on 'Bringing the Sense back to the Environment' – six day seminars with a public lecture attached to each, followed by a culminating three-day conference. This funding brings out a general and very important fact about

the humanities. For a relatively small sum (e.g. £40,000) we can set up a really significant project (e.g. involving a leading visiting scholar working [at our Institute] for six months, to the benefit of all [national] universities).

It is clear that, while some centres and institutes have been struggling in recent years, others have benefited from targeted funding, coming from either private or government sources. One American director said:

> *(NA1)* We received a $10 million dollar naming gift two years ago. [We're s]upported both by gifts and the university. Recently we received a $775,000 additional Mellon grant to support a three-year university-wide seminar on the topic of violence.

A Japanese director reported on the government-supported programme 'Global Centre for Excellence' in the Humanities, in Japan, which has funded research centres in the last five years:

> *(As8)* The funding was substantial, although my institution also provided supplementary funding for running the programme for them. Basically, it currently has a tendency to shrink but, on the other hand, it is becoming more selective and for those select institutions and organisations they have a chance to get more funding. This means that the Ministry of Education in Japan is trying to give more focused support for key institutions and trying to make them global Centres of Excellence.

The Japanese programme highlights an ambiguity in the support for humanities centres. While most have been established with a view to providing generic support for the humanities and have therefore facilitated individual researchers to pursue their own research interests, there is clearly a tendency for humanities centres to pool faculty resources and to bid for targeted programmes. A UK director put it this way:

> *(A9)* We are now involved in our first ventures into collaborative EU funding bids; this may be the way of the future.

Infrastructure

Humanities centres and institutes highlight the problem of basic support for research, or what may be termed research infrastructure. Of course,

the needs differ immensely across disciplines. Many of our interviewees had very simple demands for such support:

> *(NA11)* Office or quiet space. Library with books and Internet access. Computer. We don't need a lot, but that's not so true for people doing visual and sound studies and new media. They need more sophisticated computers. All of these things are available on this campus.

The notion that the humanities are cheap, as in they do not require a lot of infrastructure, was mentioned by several interviewees. One respondent said:

> *(NA7)* Science requires a team of senior investigators and an army of graduates and postgraduates and you need space and expensive equipment. But in the humanities, it's difficult to recruit grants to remove you from teaching. I am on a number of grant evaluating committees, and we have a deliberate policy of trying to weight our provisions for junior faculty because they really need it. I'm taking a sabbatical year next year, which is three years overdue. I need to finish a book, and what I need is time to sit at home in my pajamas and write. We're about to lose our offices that we have right now, and we're moving to a new site, which just has cubicles. But that doesn't bother me too much.

This sentiment was echoed by a Russian scholar who did not identify any special needs:

> *(R2)* Nothing special, actually; every anthropological research is usually done by a single scholar, we do not work in teams as sociologists usually do, so that in this respect we are closer to historians and philologists.

Another respondent identified infrastructure as research time:

> *(NA10)* I think part of the infrastructure of a university has to be regular time to do research. I think that's being questioned, due to a lot of budget cutting. I think universities that can bring in large grants, so it's the lab sciences. I think the humanities are having a hard time establishing the need to do research. There is a feeling that the research can be done on the side in inexpensive ways. But, of course, it takes time and travel. Our university has dramatically improved its

funding for travel, but for the humanities in general there is certainly not enough support. If you look at funding profiles of humanities scholars as opposed to social sciences scholars, there's just much less out there. And if you compare it to the natural sciences, it's even more dramatic.

Often the library is identified as the core support structure:

(E14) In the humanities, the highest cost comes from subscriptions to magazines, journals and reviews (online or not), which tend to be really expensive because of some editors' monopoly. Some disciplines also require special materials, e.g. linguistics, but generally speaking infrastructure costs in the humanities are low, for we do not need laboratories, machines and so on, like in the sciences. We do not have enough rooms for offices because places were built and attributed according to the approximate number of intern ordinary professors (and collaborators); this did not include visiting professors or research fellows, PhD students, etc. It is difficult to deal with this issue and find sustainable solutions. Besides, funds allocated to indirect expenses for infrastructure, maintenance and administration of research projects, which are called overheads, cannot help us to solve this problem.

It is clear, however, that support needs are developing:

(NA7) I needed research assistants to gather data, I needed statisticians, so then you need a team. That's why my RO1 needed $2 million over five years. I would need equipment and I would need to rent space. And that's typical for scientific research and why it needs so much funding.

Another respondent felt that, while digital equipment needs for humanistic research are increasing, the major investment needs are in the collections and repositories:

(ME2) The humanities tend to work with a rather light infrastructure, if any. A desktop and a laptop, some basic software, a scanner and a digital camera are very often sufficient to perform the major tasks of the craft. The weight of infrastructural investment is rather on the side of service rendering institutions, such as libraries and

archival centres. Digitisation, online accessibility, etc. are increasingly becoming necessities in the field. So I would stay that is really where most of the infrastructural needs are concentrated.

An African respondent was clear about the basic infrastructural needs at his university, and the failure to meet them:

(Af1) Fast broadband Internet access, better cameras for field recording, better editing software (Final Cut would do nicely, although it needs outrageously expensive Mac computers. Sigh.) Is there adequate funding for such infrastructure in your institution? What a lovely question! It is my absolutely pleasure to answer an emphatic NO!

African respondents repeatedly lamented the deficiencies of ICT resources and the library:

(Af1) The only online archives we have access to are JSTOR and parts of EBSCO Host. I would give my keyboard for access to SAGE, ProQuest or Project Muse; perhaps chuck in the screen for Wiley, Cambridge, Routledge (I can use a cheap cloned tablet PC to replace the keyboard and screen!). Once in a blue moon though SAGE gives out free journal access for a month to some select titles they probably want to push along. We call it the downloading period! Log in and get whatever you can. It is easier to chuck it later than gnash your teeth about not having it when the opportunity came!

Another respondent was similarly emphatic about whether infrastructure was adequate:

(Af6) NO! This is more so since the neo-liberal policies of the IMF/ World Bank in the 1980s that required governments in Africa to reduce their investment in the education sector.... [The needs are:] reliable Internet connectivity (with enough broadband) to allow the trafficking of vast amounts of data; access to working computers for staff; a book allowance to procure books to supplement library resources (e-journals) available at the university; a proper research office whose role is not merely vetting research proposals but one that can fund research; upscaling of training for researchers; leave time to allow academic staff to conduct research.

Another respondent, a historian, similarly pointed to ICT and library deficiencies:

> *(Af7)* My field does not require much infrastructure for researchers to do their work. However, inadequate office space has been affecting the work of researchers because they have to share space. This has tended to lower the morale of researchers. The major challenge for researchers at the university is inadequate ICT facilities. The library too has not been keeping up to date with secondary sources. While the population of undergraduate students and researchers (postgraduate students included) has grown over the years, the library is not growing at the same pace. Secondary material is therefore a challenge to access.

While digital resources may be easily identified as deficient, some respondents felt that the real need may be caused by a legacy of a lack of investment in print books in the past: 'There is an improvement in digital libraries, but mainly where journals are concerned, rather than monographs. The lack of print books is still a barrier to humanities research in Africa' (Af2). An Indian respondent (As1) felt that infrastructure is 'completely inadequate for books, library materials, old manuscripts, private book collections'.

The dependence on Internet resources as a way of overcoming obstacles of distance and a lack of physical resources is apparent in interviews from other continents as well. A Middle Eastern respondent said:

> *(ME3)* Databases of information are available for my kind of research. The Internet is important, as it's very costly to bring people here from other countries. So if you want to collaborate you have to use Skype or speak by phone. But, compared to the rest of the region, [my country] is weak in terms of this sort of infrastructure. Telephone lines are poor and expensive.

In Russia, digital library resources are accessible in leading institutions while many provincial universities are suffering from a lack of access:

> *(R4)* Apparently, one of the kinds of such infrastructure is access to digital libraries and databases; this type of infrastructure exists in both universities I'm working in. Higher School of Economics is one of the few Russian universities which has subscriptions with basic digital journals (JSTOR, MUSE, Taylor & Francis), and databases (Web

of Knowledge, Scopus). Moscow City Pedagogical University has a subscription with Russian digital library system, Knigafond. Both universities give access to these databases to their members. However, Higher School of Economics is funded better and could afford more. This kind of subscription is very much needed in Russia, as normal paper libraries are very poorly supplied with books and magazines.

An academic located in a provincial university confirmed 'there is a problem to access academic journal database that requires institutional subscription' (R5).

One Russian academic felt that travel support is the most urgent need:

(R6) Most universities in provincial Russia act as isolated islands, with researchers well acquainted only with the work of schools of thought and methodology accepted within the micro-community of their department. Thus, grants and travel aid is of utmost importance to overcome this form of alienation. Grants in humanities are usually meted out by the Russian Foundation for the Humanities, with its ever-dwindling budget. For most young researchers in provincial universities, the main issue is being stranded in their research, with little communication with colleagues in different cities and minimal conference exposure (their own institutions either do not support conference visits at all due to lack of funds or are simply not interested in researchers' professional growth since they see them only as teaching automata). A conference trip can be purposefully made Kafkaesque (e.g. a researcher is ready to pay out of her own pocket, but has to sign the same amount of forms anyway, waiving their right for financial support back to the university). A number of academic researchers have got used to relying on foreign grants and/or own sources to finance research trips and conference visits, arranging their short periods of absence at their universities with their superiors. My institution is no exception to this trend. In more innovative aspects of the humanities, such as cultural studies, Russia is starting to witness the rise of the itinerant researcher, who often changes affiliation and earns money through grants and lecture trips.

Corruption is a real problem when it comes to large infrastructure investments in Russia:

(R8) Infrastructure is the easiest way to 'assimilate resources' [Russian idiomatic expression used to identify semi-corrupt or almost

non-corrupt ways to spend extra funds allocated to governmental institutions]. That's why in terms of infrastructure governmental universities such as … are in a much better position.

Digital technologies may be seen by many humanistic scholars as simply a question of increasing accessibility to resources, but others identified real changes to their own methods of work:

> *(Af3)* Digitisation is significantly changing research practices. There is now much greater access to resources, it is easier to analyse data using both qualitative and quantitative packages, and referencing has become much more straightforward with access to tools like EndNote. Digital tools have also made consultation easier, and benefited peer review and the reporting process to research communities and individual academics.

With the increasing emphasis on digital resources, there may be an increasing need for training. While most did not identify digital competency as a problem, some identified it as a major issue for academic staff. A respondent from an organisation working to improve research systems and infrastructure in African and other countries identified a need for training as much as for physical infrastructure. He had reviewed a number of universities in Africa, where there had been philanthropic initiatives to create online journal access and found that the resources were much less used than expected.

> This was a cross-disciplinary study, but with sizeable humanities participation. There's a huge question around information/digital literacy. Academic teachers are not inducting their students in how to navigate online journals (or encouraging and expecting them to look at online journals in the first place). There's a lack of familiarity with both sources, physical and online journals and how to navigate them. When you haven't had access to the physical journal, but do have online resources, you treat articles as fragments (by using Google to search for them), rather than as contextualised in journals, i.e. as episodes in a long-running debate. This isn't an African issue, the same would probably be true of a student entering HE in recent years, when everything was online. My overall point is that, where online resources are concerned, there's a difference between their availability and the ability to search, find, navigate them. There are quite a number of African universities creating institutional

repositories, but there don't seem to be many projects about creating online repositories of research materials within or across disciplines, countries (in the humanities) (Af2).

As the respondent states, the concern with the lack of digital competencies is not restricted to one continent, although an African colleague made the same comment:

(Af3) In addition to e-journals, I make use of e-books and electronic teaching and training materials. Researchers do not always have the necessary skills to make use of these resources however. Many do not have the skills to operate resources like digital libraries and electronic packages, and many of these are not easily available.

An American respondent saw a need encompassing the entire ICT field:

(NA3) What we need: 1) human resources; 2) software/other platforms; 3) hardware resources. Humans with the knowledge, training, imagination. We need the programming and platforms. We need the hardware, in all senses, to carry out our work. When you think of a big project like the MLA commons, we have a grant from the Mellon Foundation (the Mellon foundation is ahead of the curve on digital humanities, the NEH as well). I think we have some excellent infrastructure in the form of these two offices in particular. But it's a drop in the bucket compared with what the scientists have access to from the NSF and NIH. Support isn't spread evenly. Grants from the NEH and Mellon are seed money for projects that will eventually be self-supporting. Considering the decreased budgets of schools, it's very hard to sustain these projects that take a great deal of money; to fund things like software engineers and human resources to create and curate these materials. Great deal of interest in preserving in a sustainable way to fund what we're creating. There is funding to make things possible, but not from sustainable resources. Most humanities don't have full access to the pie. Unless they are a revenue generator, the projects are difficult to sustain.

For certain disciplines the change of practice and needs were very evident:

(As2) Film studies ideally need good screening equipment, tools for creating images as well as for dissecting them, etc. My institution,

being public funded and based in an economically disadvantaged place, finds it too difficult to get adequate resources.

Other disciplines, however, have also changed in perceptible ways, which may also call for a restructuring of budgets:

(Au1) Classicists have been well to the fore in the use of digitisation and other kinds of technology. In the US especially, a lot of money has been going into infrastructure to support classical projects. This ought to lead to savings elsewhere (e.g. fewer borrowable copies of books are needed in libraries). As the example of multispectral imaging shows, special equipment for working on material remains of antiquity can be very useful.

Archaeology is another discipline that is experiencing increasing needs for infrastructure:

(NA8) Obviously, for archaeologists you need all kinds of other things: support for in field; particularly if you're working in other countries, you need permits and support from other governments. So in a field like that, there is a substantial need for, so-called, infrastructure.

An African archaeologist identified a lack of basic tools to do the work:

(Af5) Not adequate funding for infrastructure, such as trowels, spirit levels, strings, ropes, plumb bobs, buckets, global positioning system (GPS) sets, ground penetrating radars (GPR), metal detectors, magnetometer, total stations, light microscopes, computers (both laptops and desktops), 4WD vehicles, camping gear, etc.

In conclusion, while the evidence of the interviews indicates that many humanists still identify basic needs such as office space, personal computer equipment and access to the physical and digital resources of a library or other repository as the essential requirements of infrastructure, there is a growing demand voiced by others. The demand stems in part from new technologies, which are being put to use in traditional humanistic disciplines and they stem from the fact that teamwork generates new demands for support structures and communication. The awareness of rising opportunities, thanks to new infrastructural facilities, will probably inspire humanist researchers to raise new questions and stage new types of research, for instance historians carrying out

agricultural experimental studies. A positive loop may follow: new technologies, new questions, a quest for another renewal of technologies, and so on. To the question of whether there was adequate infrastructure in place one respondent answered:

> *(NA5)* Of course not. We produce a lot of research, but we could do more. For example, most faculty do not have anyone helping them write grants. Other universities hire grant writers. We don't have much in the way of research assistants, unless a department has a doctoral programme, and only five departments in the school have doctoral programmes. Within the doctoral programmes, faculty might have research assistants, or not. Don't have work study, but we have something better, undergraduate research opportunities. Working in a lab instead. The idea is that they are actually working on research with faculty. Students really love it, internal internship either paid or for credit. In the humanities [it is] a little harder to understand what that would look like (Xeroxing or running errands). We don't have anyone helping with the low-end stuff, and we haven't figured out how to use the mid-level stuff.

Another respondent similarly pointed to a change in work practices that will end the days when the humanities could be called cheap:

> *(NA6)* We are beyond the era in which all you need is your workstation and researchers sit alone by themselves. We are in the era in which we now need to seek, for example, start-up packages for hiring and retention. We need more interesting start-up packages that include not just ordinary technologies for individuals, but those that serve both original research and collaborative research. We need state of the art web conferencing and scanning. We need a whole fleet of project-scale technologies. The funding is inadequate at most campuses. ... There are many scholars in this nation and elsewhere, at small liberal arts colleges or community colleges and second or third tier universities who are eager to do research but they just don't have R-1 infrastructure. The infrastructure issue is not at R-1 level, but anything below, the vast majority of institutions in the US and elsewhere.

Conclusion

The voices of the interviewees represent a broad spectrum of personal perceptions and interpretations by humanistic scholars about their own

workplace. It is striking that, although the financial concerns of recent years have impacted some badly, the vast majority have not experienced major changes. It is clear that a sea change is taking place in countries like China and some Latin American countries, with rapidly increasing investment in the humanities. Because of the large number of universities and their ambitions to aim for the top, the world of humanities institutions is going to change markedly in coming years.

We identified two major financial models for the humanities: a North American model, which has a focus on individual research supported by major endowments and tuition fees and is often facilitated by sabbatical programmes housed at humanities centres; and a European model, which emphasises competitive funding streams that encourage the formation of large research teams. A general striving for excellence tends to concentrate more money in top institutions both in east Asia, North America and Europe. The digital revolution of the last 20 years has facilitated access on a global scale to key resources, but access is still very uneven across continents, and African humanities in particular suffer from a history of deprived institutions. Problems of corruption and the conservatism of governing structures are said to impact humanities research in some BRIC countries, despite sometimes rapid growth.

Our interviews bring out clearly that globalised access to libraries and databases is the main desideratum by researchers on any continent and that digital platforms – although far from perfect and certainly not available in equal measure – are creating new possibilities of communication, knowledge sharing and collaboration.

If the digital transformation is very much a process that is working its way through humanities institutions, pressures of budget models are reshaping humanities institutions from without. We have identified two main budgetary models, the American and the European, and while mixes of the two certainly exist and other models may be developing, we believe it is generally fair to say that the two models are driving the humanities in opposite directions. On the one hand, there is the world of the tenured American professor, who is essentially free to pursue individual research interests, whose main source of research support must be sought within the institution – except for occasional sabbatical fellowships at a humanities centre or archive. While academic freedom is maximised at the American university, the humanist is restricted by the fortunes of the institution as endowments and tuitions are influenced by the market. The European model, on the other hand, depends on the willingness of the taxpayer to invest in research and, while the state provides a core grant to the institution, the enterprising academic is

encouraged to apply for large grants for teams to address grand research challenges.

The two funding models have created two very different academic structures: the American humanities centre which essentially provides research space for visiting scholars and engages in public lecture programmes; and the European research centre, through which a small number of faculty promotes a targeted research agenda with a host of postdoctoral and graduate students. Between the two extremes, blends of both do occur.

So, are academic institutions fit for the 21st century in terms of budgets and infrastructure? If we had had the resources and access to information, it would have been interesting, for example, to study a large number of academic biographies to see if they reveal specific institutional structures that have been conducive to high-quality research. As it is, however, we have had to take the simpler approach of asking researchers for their impressions. Looking back at these interviews, the overall problem is one of inequality. At the end of the day, access to information, collaboration, and indeed computation, is determined by budget rather than academic excellence. The humanities are not a level playing field.