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The University Library in Tromsø as a Learning Centre

by HELGE SALVESEN

INTRODUCTION

The University Library in Tromsø is the library of the most northerly university in the world (see Fig. 1). We have a special responsibility when it comes to taking care of and making available those documents and traditions that pertain to the northern parts of the world. It is also our goal to document and make available to a wider public the University's own research activities.

We want too to stand out as the central learning centre in the University both for students and researchers at all levels.

In spite of the fact that The University of Tromsø is the youngest and the smallest university in Norway[1] we are at the moment in a consolidation phase, largely due to the recent expansion in student numbers and the challenges that are expected in the wake of that. The pressure on teaching at the higher levels, together with the training of researchers, will result in the need to strengthen the academic infrastructure since it will be an important support both for this teaching and the research associated with it. It is expected that the need for the library will increase dramatically as the introduction of more project based exercises and problem based teaching replaces the reading list, a method of study that has dominated much of university education this past 40 years. Distance learning and decentralised educational forms will also demand new ways of disseminating information. Here it will be important to develop points of contact with the local library services and the study centres of the secondary schools.

A professional library at a university is dependent on personnel with a thorough knowledge of the academic disciplines if it is to give a good return on the capital invested in it. In future research grants will be channelled to those institutions that give the best return. An institution with a good academic infrastructure will be the most likely one to give such a return. Good library

services are that part of the infrastructure which has the most direct relationship with study and research.

In addition to the University Library being a centre of documentation and reference for the relevant academic literature, it ought also to be a centre for what one might call an academic culture. The University Library ought to be a meeting place for cross-disciplinary milieus as well as the external face of the university. But to be the bearer of an academic culture naturally involves the University Library being engaged in research associated with library studies and documentation. Here I think above all of academically related research, which is particularly suitable for a research milieu at a research library. Library research will enliven the whole academic milieu not least through the work on collections. Awareness of the unique value of collections must be restored. Theory creation is not the only good science. The arrangement and presentation of collections is also of value in itself.

The University of Tromsø is, in many ways, a university of the north. The University has set up a centre for Arctic research. It will promote co-operation between disciplines and between researchers whose work covers the northern areas. Other important research fields are fishery research, aurora/space research, community medicine and research on topics related to Sami culture and population. Should the co-operation be a success, the University Library will actively support these fields through its collections.

To be a budget winner the University of Tromsø must create a clear image of its academic strengths. But that will also create obligations for the institution. When one thinks about it, it is obvious that one of the criteria used to determine a centre of excellence is that the institution's library should have the country's best collections in certain discipline areas and also the best reference services in those same areas. For example the Library ought to bring into the open the archives of the Northern Lights Observatory. The Ultima Thule collection will absolutely help to strengthen the university's profile. The Nobel Prize winner Knut Hamsun collection, together with a bibliographical project on Hamsun, is a real scoop for the University in Tromsø. A joint Nordic Sami bibliography taken in conjunction with our own special Sami collection should put the University on the international research map. We are also involved in a project to build up the Polar Regions' international bibliographic reference database (PolarPac5). As part of The Council of Europe's Cultural Routes programme, the University Library in Tromsø has taken responsibility for a digital exhibition, *The Northern Lights Route*.[2] The exhibition is built up like a collection of Russian dolls, with the net presentation providing viewers with the fascinating and compelling qualities of the northern regions.

The University of Tromsø will also promote itself as a university which lays a particular emphasis on teaching methods that are focussed on problem-based learning, project work, distance teaching and decentralised study. This lays particular demands on the library as a resource centre for this way of organising studies. The library will be a study centre for project work and problem solving, quite different from the traditional reading list based learning mode. If distance teaching is to become as big as there seems to be the political will that it should be, then the question of decentralised library services will need to be given a priority of quite a different order than that which exists today. The electronic network will become an essential study aid.

Currently plans for a new departmental library for law and psychology are in the planning stage. From the outset this new library is to be a learning centre on the lines of those in Great Britain, and especially that of the Sheffield Hallam University. There is also to be a digital centre into which will be gathered the production of teaching materials, the digitalisation of documents, the publishing of digitalised and paperbased products, the production of film, video, and audio programmes.

Within the Nordic states, Denmark and Finland have led the field in actively meeting the new digital challenges at a national level. In Denmark, the government, in 1998, earmarked 30 million EURO for the development of the DEF Project - Denmark's Electronic Research Library. Similarly the Finnish government has channelled 3.75 mill EURO, via the University of Helsinki, into FINELB – The Finnish Electronic Library. Some 1.8 million EURO are annually earmarked for the development of SVEBIB – The Swedish Electronic Library.

Norway is dangerously last in the field in Norden, lacking either projects or plans for a national commitment to the most important resource for the quality assured collection of information and the production of digital material. Due to the fact that Norway has a long way to go to reach even the average OECD level for nationally produced research, there is no reason for laissez faire attitudes on information policy. In such a situation the cheapest way for a country that does not produce much research of its own, is to build up the most effective systems of gathering information from where it is produced, storing it and disseminating it to where it is required. Besides it is in itself bad economics not to have the best systems in place for storing and retrieving established knowledge. We must, therefore, invest locally in the individual university libraries and build up local expertise in finding the most relevant information in a given context, reducing to a minimum anything that muddies the waters. This requires the systematic development of digital libraries and the build up of competence in an essential part of library resources, namely

human capital. Competent discipline specialists and cataloguers in a digital library will both create products and make an active contribution to teaching and research projects as guides to knowledge.

THE REMOULDING OF RESEARCH AND HIGHER EDUCATION

What system of higher education is the academic library of the future to serve?

Within the global knowledge economy, the higher education sector has become a rapidly expanding international market. In the past, higher education has been a public service, but according to comparative educational research[3] private initiatives probably now form the fastest growing segment within higher education, world-wide. Furthermore, within the knowledge economy, there are clear signs of a growing partnership between universities and private capital. Whilst the universities contribute with their academic expertise and their ‚academic packaging' – so important for trust in the marketplace – the other partners provide production facilities, distribution and marketing, as well as the technology that makes it possible to operate in a market that demands flexible methods of teaching, namely the Internet.

In recent years our own institutions have been subject to crises, most notably of a *financial* nature. Todate the reaction has been to set up evaluation projects, to reorganise, to create strategic plans for teaching, research and promotion policy, whilst retaining the classic values of the university. What has not been clearly grasped is that the crisis is very largely one of *relevance*. What it demands is a switch of resources into an educational and research market which demands good results, both qualitatively and quantitatively, far more than democratic decision making, bureaucratic control and reporting mechanisms, and security systems for unimportant procedural failures.

Within such a socio-cultural and economic paradigm shift, the universities that will come out on top are those that win the competition for students. Such institutions will prioritise teaching quality, as measured by examination results, will secure for its graduates challenging and well-paid jobs, no matter whether those graduates are 25 or 50 years old, and whether they have studied on a traditional campus or in a distance teaching centre in the workplace. To guarantee the quality of teaching it must be research based, in the sense that it is produced by teachers with top research qualifications.

How should such institutions be organised? Not along traditional lines would seem to be the surprising result of a joint Swedish-American research project led by the American sociologists Rogers Hollingsworth and Jerald Hage and the Swedish historian Ragnar Björk. They have studied the organisational framework of institutions where the research produced aims at or results in Nobel prizes.[4]

Firstly, such institutions are in most cases small with a great ability to readjust, where the academic milieu is organised on complex cross-disciplinary groups, where all are interested in the same problem and work intensively together, and where the lines of communication are short, both vertically and horizontally. Experience shows that it has been mostly through cross-disciplinary groups that ways of thinking have taken off in new and constructive directions. Often the basic idea behind the great breakthroughs in one discipline are taken from another disciplinary area. The organisations are hierarchically organised with a clear management structure. The leadership engages in constructive disciplinary criticism that is strong yet tendered with respect. The leadership is chosen with great care, on the basis of academic competence, leadership qualities and entrepreneurial spirit. Social relations are well developed, both hierarchically and across disciplines. That the leadership normally eats lunch with their younger colleagues is regarded as exemplary. Students pursuing higher qualifications are regarded as a valuable resource for research projects.

DEMANDS ON LIBRARIES

If we combine the demand for good research organisations with the need to win the competition for students, then we can see an outline of the demands that will be laid on the infrastructure that will supply an academic service, as, for instance, in the case of academic libraries.

For researchers it is important that a library can make available the best possible relevant information, as quickly as possibly, no matter where in the world it is to be found. To this end it is necessary:

- to have a collections based library tied to the institution, where as much as possible of the most frequently used literature, together with the specialist literature associated with the institution's centres of excellence, are made available via simple retrieval and loan systems,
- that the library is tied together in a network with other libraries in a common inter-library loan system,

- that important internet resources are integrated into the library's search systems,
- that relevant research material produced by the home institution is made available through the library, that is to say, doctoral and MA theses, research reports, conference reports, posters, grey research material of all kinds. The more of this that can be made electronically available, the better. The library must develop good systems for producing, storing, retrieving and making available all such material,
- that as much literature as possible, especially academic journals, dictionaries, encyclopaedia and other reference works should be made available through the library as electronic documents. The library gives added value to these products via the best possible gateways,
- that a multimedia catalogue is available, i.e. a technological base for generating multimedia products in the library, both acoustically and visually,
- that the academic librarians in the library share actively in the research projects of the university in order to produce the latest developments, and otherwise act as guides to the sources of knowledge that are available.

In meeting the information society of today and tomorrow, the basic challenge facing libraries is to combine the responsibility for the dissemination of knowledge in the scientific and cultural history sense on the one side, with the development of effective information systems which adjust libraries to the new work and study methods that are coming in the wake of information technology. Even if the electronic documentation which libraries handle only makes up a minor part of the activity of an academic and research library in the year 2000, such libraries must prepare themselves for a radical changeover to digital dissemination methods. The development of a virtual library system will demand, however, specific funds from the authorities in Norway for the conversion process, in line with those of the other Nordic countries.

Traditionally, research libraries have built up their collections on the basis of current usage and on the perceived need to act as society's archivist for generally available printed material. This function has been necessary in order that scientific documentation and reference can operate. Besides, the work done on collections by the libraries, so as to make them more accessible, has added to their value, academically. From a research point of view, the responsibility for maintaining the quality of the collections to a high academic standard, must be continued. That is laid down in the law relating to universities and colleges in Norway.[5]

Digital aids open a completely new world for the dissemination of academic literature. In the first place, the older paper-based collections of great value and relevance for research and teaching, must be made available in a digital form. It is a national task that can be realised by co-operation via the internet between the National Library and the libraries of universities and colleges. Secondly, the development of a virtual library system, will be of decisive importance in providing a rapid and effective access for norwegian research and higher education institutions to academic literature that will be published digitally in future.

The role of libraries as the disseminator of literature will face a new challenge in the changeover to greater electronic processing. Instead of *buying a single copy* of a physical document which is then made available for borrowing, libraries will *buy the right to use* an electronic document. Access to electronic documents is not affected by the opening hours of a library. Students and staff of an institution which has bought the rights to use an individual document, will have access to it via their own PCs for 24 hours a day. The library adds to the value of the electronic document through a well organised graphical user interface and simple gateways. There are, however, great challenges ahead when it comes to clarifying questions relating to authors' rights and just who will have access to the electronic documents, and not least how one establishes a chain of responsibility for securing the archiving of such documents for use in, amongst other things, academic documentation.

Up to now it has been mainly academic journals that have been published electronically. In addition more and more encyclopaedia, reference works, dictionaries and other handbook literature are being published electronically on the Internet. The problem with such editions is that up to now the price often has been higher than for the paper version. Paradoxically, in Norway, Value Added Tax has to be paid on electronically available literature, whereas paper based literature is free of it.

THE LIBRARY AS A LEARNING CENTRE

The institutions of higher education must each make their own internal arrangements so as to ensure that training in the use of library based sources of knowledge are part of all discipline based studies. The library must, in co-operation with the academic disciplines, set up academically related problem-based documentation and reference training courses, in which the students, through net–based guidance, learn to find their way through the information jungle, in the search for relevant information on specific issues. It will be a

good training for students to teach themselves how to fetch relevant information on a specific theme. Through such co-operation, it is also possible to show how modern information processing and forms of presentation can contribute to the opening up of new possibilities in discipline content. Dynamic illustrations and the utilisation of multimedia materials are keywords on that.

The gathering and dissemination of knowledge will give rise to new disciplines.[6] The reason for this is that, in order to get hold of the most relevant information in a particular field, or on a particular problem, it will be necessary to have in place a quality assurance system that will enable us to assess critically the enormous amount of information we are all faced with, when we log onto the net. At the university level there will be a growing need for a critical approach to information, for an ability to analyse and assess information. The acquisition of the skills required for this may well reduce the time devoted to the sheer accumulation of knowledge. It is true that the acquisition of such skills has always been a defining characteristic of university studies and a major strength, on the labour market, of a university education. But for the information society of today and tomorrow, such skills are absolutely essential. A major task for universities of the future will be to monitor the quality of information taken from the Net. Increasingly, seminars of the future will be focussed on the need to assess the provenance of information. What one knows will increasingly have to be viewed in the light of how one knows it. Where does knowledge come from and how can one ensure that the sources of it are reliable? Source criticism will be vital for all disciplines as, traditionally, it has been in the training of historians and journalists.

As a result of the great governmentally initiated reforms for raising the standard of competence for the whole population generally, universities and colleges will be presented with new challenges, especially in the demand for flexible educational routes, combined with a desire for a stronger injection of project- and problem–based study modes and lifelong learning. Such challenges will ensure that training in modern information retrieval and processing will play a decisive role.

To strengthen teaching in the institutions of higher education the library should stand out as a powerful academic service centre, strongly engaged in the production of digital teaching aids, pedagogic development work and in the documentation, reference and information fields. This assumes that one also puts into the library, the IT division, the information service and the department for flexible pedagogical development work. Further that all these activities should be re-organised into a *learning centre*, after the model pioneered in Great Britain, especially that of Sheffield Hallam University. Through relevant knowledge sources, electronic gateways and other reference

and documentary sources within a multimedia library concept, this unit will take care of all information processing both for students and staff within the institutions and for the society outside them. The new learning centre should aspire to be a „we answer everything" service.

The basic idea of the learning centres in England is to teach students to work independently. To do that one must make the library more than just a place where one borrows books and uses the reading room. One wants to integrate several functions, as did the traditional library based on books being borrowed from open collections. These other functions include digital services where each study bench is equipped with data machines linked to the Net, with access to full-text databases, digitalised teaching material and other information that can be fetched from the Internet, e-mail, multimedia facilities such as sound, picture, video and film, video-based lectures, locally prepared teaching material, net-based discussion groups, workstations organised in such a way that several students can form self-help groups within the library itself, as well as access to other kinds of *learning material* as, for example, physical models etc.

In addition to its reference and documentation functions, a learning centre has its own *production centre* where teaching aids can be created in its own TV studio; the editing of video lectures and other digital learning materials can be carried out; older paper-based materials can be digitalised; anthologies, text books, conference reports, can be published alongside the production on demand of copies of MA and doctoral theses and other self-created research of the institution. Students too use the learning centre to produce their own work arising from their project and problem based study assignments. It will also be possible for a learning centre to provide opportunities for study and exam assignments to be completed other than as written work. For example they could be presented in a multimedia format, as displays or physical products.

A third element of a learning centre is the integration of an *educational department*'s standards agency in the development of teaching aids, flexible learning and further and post-education. To tie such an agency into the learning centre will contribute to the creation of a good framework for it within the institution and direct its activity towards an academic service function.

Through this three pronged function the learning centre will be amongst the most important elements for providing the academic services which the students of today and tomorrow expect from an educational institution in which they are to invest their study capital. Besides such a service unit will be the best way for institutions to meet the new further and post educational reforms.

It is such learning centres we want to create at the University of Tromsø, at first within the departmental library for law and psychology, but in the long run we want the entire library to be organised in such a way for all disciplines.

The new library, expected to be completed in 2003, is the third library on the university campus. A new library has, in fact, been built in each of the last three decades. Each of these reflects a different library ideology. The main building, housing the collections of humanities, social sciences and (until 2003) law, was finished in 1981. The essential features of that building were collections of printed matter on open shelves together with a large number of desks and chairs for readers. Expansion took the form of departmental libraries.

The second of these departmental libraries – it covered the natural sciences, medicine and other disciplines associated with health care – was opened in 1991. In essence this is a periodicals' library, with good photocopying facilities, but very few places for readers. The idea was not to make the library a workplace, but rather somewhere from which students, and researchers in particular, could obtain information quickly and effectively.

The new library for psychology and law is based upon a completely different ideology. The idea is to establish it as a learning centre on the English model, par-ticularly that developed by Sheffield Hallam University. The library will be located close to the departments of law and psychology. It will cover ca. 2,200 m², on four floors, with an entrance on Plan 3 (see Fig. 2). Storage space for periodicals and books will be on Plan 1. Printed matter will be set out on mobile shelves with open access for users. Plan 2 will, for the most part, provide workplaces both for individual and group activities, and electronic work stations giving access to documentary and reference facilities and the opportunity to create one's own documents. There will be few bookshelves. What there are will contain handbooks and standard items that are used frequently by students. Plans 3 and 4 will provide many workplaces, together with much paper-based literature. The idea is to adopt a layout here that will provide maximum flexibility, so that more and more workplaces, with equipment for accessing multimedia resources, will be provided, as the demand for paper-based literature declines, such literature then being placed in storage on Plan 1. Important tasks for library staff will be to provide guidance on methods for finding, evaluating and choosing quality infor-mation.

A digital centre will be located between the psychology/law libraries and the main library building, with a view to the production of digitalised teaching

matter, film, video and audio material, the digitalisation of older paper-based sources and a publishing unit for both digital and paper-based works.

In the longer term, and based on the experience and evaluation of what emerges from the first learning centre, the aim will be to convert the other departmental libraries into learning centres. To work towards a joint learning centre is not practicable as both students and researchers are too strongly wedded to the ideology of de-centralisation. The grounds for a moderately decentralised model with smaller specialist libraries, rather than a large central library are 1) the short distance between the library and office and teaching accommodation; 2) a strong preference for a de-centralised acquisi-tions' budget together with a close discipline and social bond between the individual study/research milieux and their associated libraries and 3) the ease with which collaboration can take place between disciplines and their re-spective libraries, when it comes to research projects and teaching pre-sentations.

It is, however, important to see the entire Norwegian library system as a common resource. The strategy must be not to plan on the basis of the individual library or of proprietary rights to it, but to see the users' need to exploit all the library resources of Norway without organisational or administrative hindrance. This raises, however, the question of financial responsibility. Is it reasonable that a university which finances a university library should serve other users without demanding payment?

In the absence of a national co-ordination of the Norwegian library system, the universities, the academic colleges and the state colleges should set up an organisational network which will give users the same rights and opportunities to access their basic services. Furthermore access to digital services should be co-ordinated with the public library system. The National Library must lead the staff aspects for the work of digitalisation and obtain the necessary finance from the Norwegian Research Board, the Culture Board, Fund and central authorities.

CONCLUSION

There are reasons for drawing attention to seven areas regarding the place of libraries in Norwegian higher education and research:

- The creation of „a Norwegian electronic research library" demands a national commitment far greater than the resources that are today channelled into the university and college library sector;

- a policy for and a strategic commitment to the retrospective digitalisation of important, but relatively inaccessible collections;
- a strategy for the production of multimedia pedagogic and research material;
- a strategy for the greater integration of the library in education and research, including a conscious commitment to the library as a learning centre in universities and colleges;
- a strategy for the integration of the new information resources, especially the new digital text and multimedia databases, with the library's traditional paper based material;
- the work must be carried out as a co-operative project in which the university and college libraries, together with the National Library, take a leading role;
- there is no time to lose in getting started on the task. Compared to its neighbours, Norway is a clear back-marker in this area.

Most of these needs demand a co-ordinated common strategy and a collective financial investment in order to achieve the desired results. The development of a virtual library will be of decisive importance if Norwegian research and higher education institutions are to get satisfactory access to the academic information which is being made available at an ever-increasing rate. The digital library will play an especially important role in the realisation of the great further and post-educational reform, which both the state and the business community have set such store by at the present time: flexible studies and decentralised study opportunities. The learning centre idea will be central to this work. But it is important to operate locally to achieve the results for the actual users of the library.

REFERENCES

1 The Parliament decided on March 28th, 1968, to establish a university in Tromsø. September 1972 was the official opening with the first students arriving in Tromsø in that year. The number of students rose from 420 in 1972 to 6,800 in 1996, falling to 6,200 in 1999. The governmental budget was 100 mill. EURO in 1999. The budget of the Library was 5 mill. EURO, i.e. 5 % of the total budget.

2 The exhibition is available on <http://www.ub.uit.no/northernlights/>. The Cultural Routes are an invitation to Europeans to wander along the paths and

explore the places where the unity and diversity of our European identity were forged.

3 See Tjeldvoll, A. (1999): „Universitetet i kunnskapsøkonomien“, in *Uniped*, No. 3. Tromsø, pp. 40-43; Altbach, P. G. (1999): *Private Prometheus: Private Higher Education and Development in the 21st Century*. Boston: Boston College Center for International Education/Greenwood Publishers; Castells, M. (1996-1998): *The Information Age: Economy, Society and Culture*. Volume I-III. Oxford: Blackwell Publishers Ltd; Newby, H. (1999) „British Education must embrace a new World“, in *The Times Higher Education Supplement*, September 1999, p. 16.

4 Bojs, K. (1997): „Vetenskap. Så får du Nobelpriset. Jobba på ett litet institut, var invandrare och våga gå emot strömmen“, in *Dagens Nyheter*, 5th of September. Stockholm; Björk, R. (1998): „The Impact of Institutional Arrangements on Major Discoveries in Bio-medical Research“, seminar Uppsala university 29th of April. <http://www-hotel.uu.se/idehist/vethist/seminarier/980429.html>.

5 *Lov om universiteter og høgskoler*, dated 12.05.1995, No. 22, § 2.6. <http://www.lovdata.no/all/nl-19950512-022.html>.

6 This view is discussed by the linguist Hovdhaugen, E. (2000): „Kunnskapsinnhenting og kunnskapsutvelgelse - nye fag?“, in *Synopsis*, No. 2. Oslo, pp. 67-69. What follows in this paragraph is tied closely to the argument developed there.

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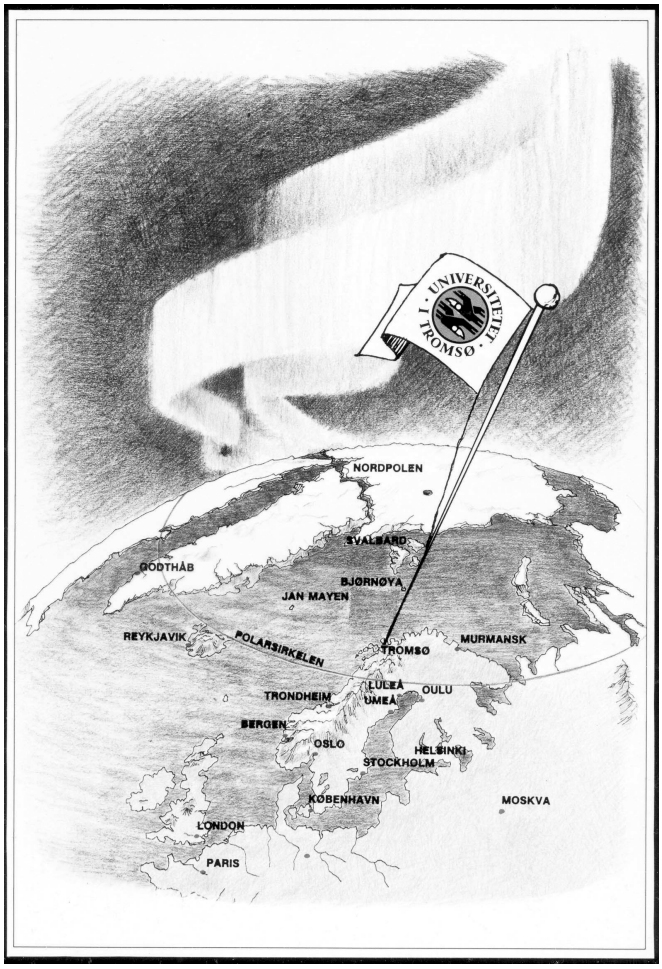
Figure 1: The University of Tromsø is the world's northernmost university, situated at 70 degrees North. It was from here that Nansen, Amundsen, Nobile and Andrée set off for their polar expeditions. One of the nick-names of the town is therefore „The Gateway to the Arctic“. The establishment of a university so far north has been called a gigantic experiment in regional policy. The University of today is a prime motor in the development of the region distinguished by its abundance of natural resources, polar proximity, multicultural communities, scattered population and major export fish industries. – The ravens of Odin, the God of wisdom in Norse mythology, are the symbols

for the University. The two ravens, „Hugin“ and „Munin“ (from old norse meaning respectively ‚mind‘ or ‚thought‘ and ‚memory‘), fly around the world every day gathering knowledge. In the evenings, they sit on Odin’s shoulders and whisper in his ear all what they have seen and heard. As symbols of wisdom Odin’s ravens are also good symbols for the Library. Our publication series is therefore called „Ravnetrykk“ (‚The Raven Press‘).



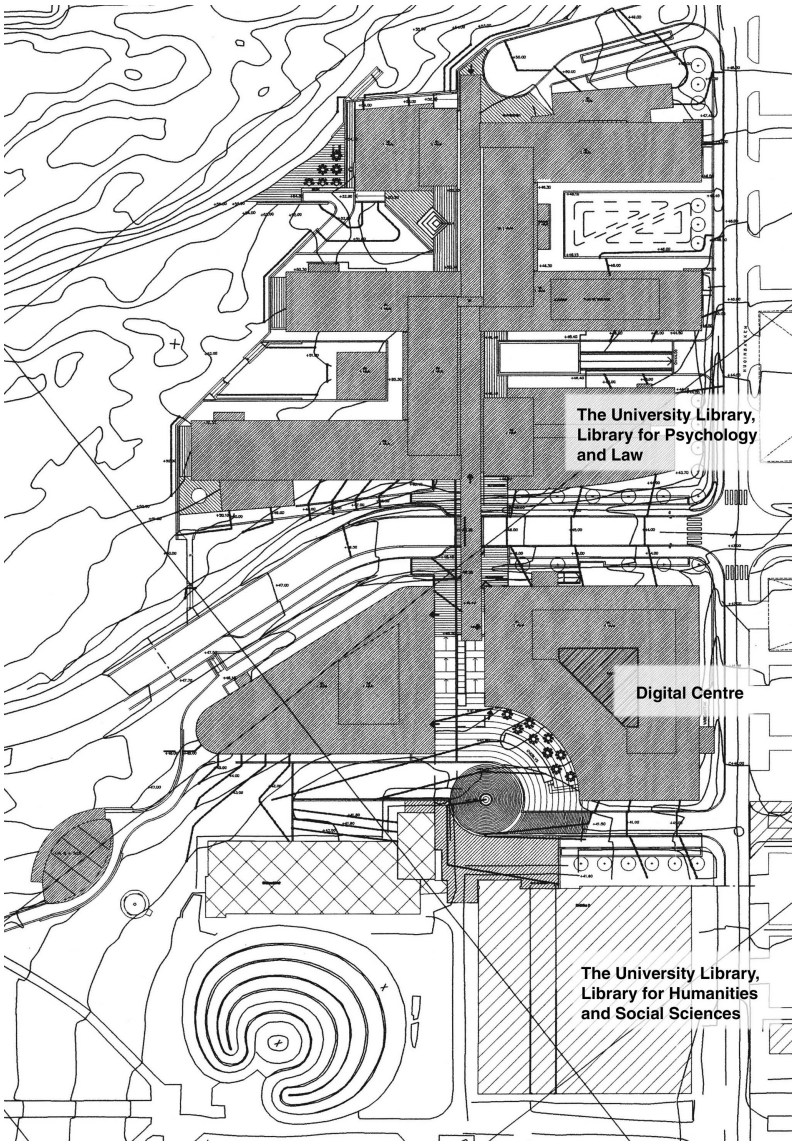


Figure 2: A plan for the new building complex on the University Campus expected to be completed in 2003. In addition to the Library for Psychology and Law, the Digital Centre and the Departments for Psychology and Law, the Learning and Teaching Centre, the IT division and the Sami Centre will be situated there.