

Centre for Advanced Study  
at the Norwegian Academy of Science and Letters

# Annual Report 2003



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# Annual Report 2003

The Centre for Advanced Study (CAS) is a private foundation. The Centre was established by the Norwegian Academy of Science and Letters in 1989, but its activities did not commence in full until the autumn of 1992. Its purpose is to promote basic research and interdisciplinary theoretical research on the highest international academic level within the humanities, social sciences/law/theology, natural sciences/medicine and mathematics. In 1993 an Operating Fund was established for the purpose of ensuring the running of the Centre. This fund is administered by the Board of the Centre.

## 1. Administrative matters

The Board is the highest governing body of the Centre. Its composition is regulated by Article 4 of the Memorandum of Association, which reads as follows: "The Board of the Norwegian Academy of Science and Letters and the Universities and Colleges Council each appoint two members with alternates to the Board of the Centre. In agreement with the Universities and Colleges Council the Academy appoints one additional member who shall be the chairman of the Board, and it appoints the latter member's alternate. ... The State nominates the sixth member of the Board. In agreement with the Universities and Colleges Council

<sup>1</sup> The Centre changed its Norwegian name from *Senter for høyere studier* to *Senter for grunnforskning ved Det Norske Videnskaps-Akademi* on 1 August 2002. Its English name (Centre for Advanced Study at the Norwegian Academy of Science and Letters) was not changed.

the Academy appoints one of the other members to be vice-chairman of the Board. ... The Board of the Norwegian Academy of Science and Letters has the right to appoint one of its members to serve as an observer on the Board of the Centre for Advanced Study." The representative of the State is appointed by the Research Council of Norway (NFR).

*In the year 2003 the Board was composed of the following members:*

Professor Aanund Hylland, University of Oslo  
(chairman) – NASL

Professor Jan Fridthjof Bernt, University of Bergen  
(vice-chairman) until 22.10.03 – NASL

Professor Kenneth Hugdahl, University of Bergen  
from 22.10.03 – NASL

Professor Bjørn Tysdahl, University of Oslo – NASL

Professor Tore O. Vorren, University of Tromsø  
(vice-chairman from 22.10.03) – UCC

Professor Kathrine Skretting, Norwegian University of Science  
and Technology in Trondheim – UCC

County Governor Ann-Kristin Olsen, County of Vest-Agder – NFR

Secretary General Professor Reidun Sirevåg, observer NASL

*Alternates:*

Professor Ragni Piene, University of Oslo – NASL  
(for Hylland)

Professor Erling Eide, University of Oslo  
until 22.10.03 – NASL (for Bernt)

Professor Jens G. H. Iversen, University of Oslo  
from 22.10.03 – NASL (for Hugdahl)

Professor Sølvi Sogner, University of Oslo – NASL  
(for Tysdahl)

Professor Hanna Mustaparta, Norwegian University of Science and  
Technology in Trondheim – UCC  
(for Vorren)

Professor Erik H. Egeberg, University of Tromsø – UCC  
(for Skretting)

County Governor Leif Arne Heløe, County of Troms – NFR (for Olsen)

The Board had 4 meetings in 2003.

## 1.1 Location, management and administration

The Centre rents offices in the premises of the Norwegian Academy of Science and Letters at 78 Drammensveien.

There were changes in the administration in the course of the year. Professor Ole-Jørgen Skog, who had been Scientific Director at the Centre for three years, wished on the expiry of his term of appointment to return to his post at the University of Oslo. He was succeeded by Willy Østreng, who came from the posts of Director of the Fridtjof Nansen Institute and professor II at the Norwegian University of Science and Technology. The change took place on 1 August 2003. The other members of the administration were Office Manager Unn Haaheim Hagen, Senior Executive Officer Maria M.L. Sætre and Executive Officer Marit Finnemyhr Strøm. In addition Project Manager Bjarne Røsjø at *Faktotum Informasjon A/S* was editor of the Newsletter, while Kristian Spilhaug at the *University of Oslo's Centre for Security and Information Technology (USIT)*, who was responsible for the running of the Centre's computer system and for providing computer support for the researchers, functioned as IT officer twice a week until he left his post on 20.11.03. From that date Espen Widding and Atle Flottorp at the same institution performed this work in co-operation with Maria M.L. Sætre.

The administration has weekly meetings at which matters of importance for the current activity are discussed, and at which plans are made for the future. Among other things a filing system was introduced, based on Nettpost's design for the provision of services to both administration and library. The work on establishing a collection of books and journals in science and the humanities was also continued in 2003. The updating and improving of the Centre's Web site is a matter that is under constant consideration, and the plan is to seek user response on its utility value and external expertise on its design and functionality. Work was also completed on the excavations for and laying of a fibre optic cable that will increase the speed of the Centre's computers from 2 to 100mb/s per second.

Co-operation with the Contact Committees at the four universities has been strengthened, inter alia through annual meetings, and the co-operation agreement with the University of Tromsø is being revised. Talks were also initiated with Norges landbrukshøgskole (Norwegian University College of Agriculture) and Norges Handelshøyskole

(Norwegian University College of Economics) on formalised research co-operation in the future. Among academically oriented measures, mention may be made of the fact that in the autumn of 2003 weekly lunch seminars between the project groups were introduced to stimulate communication, dialogue and contact cutting across research fields, groups and disciplines. This measure is intended to be one of several ways of strengthening the Centre's interdisciplinary purpose and profile. Furthermore contact was established with NFR to position the Centre in relation to the efforts that are now being made to organise and reinforce inter- and multi-disciplinary research in Norway. Contact was also established with the *Swedish Collegium for Advanced Study in the Social Sciences* with a view to integrating the Centre more strongly in the international co-operation between the Centre's sister institutions in other countries. The Centre is also involved in the work of establishing a European network of co-operation between different institutes of advanced studies – NetIAS.

The editorial staff of the Newsletter have planning meetings prior to the publication of each issue based on preceding discussions at the administration meeting. In addition to research-related material, each issue contains a leader that addresses topical issues in research policy of interest to and importance for the Centre's activity.

## 1.2 Other matters

The working environment at the Centre is considered to be good, and there is very little absence on account of illness among the staff. There were 11 days of sick leave out of a total of 4 man-years in 2003. The Centre's activity does not pollute the external environment.

## 2. The work of the Board

Also in the year 2003 the Board saw it as its most important task to work to realise the Centre's ambitious objectives:

- A. The academic activity at the Centre shall be known to satisfy the highest international standards and thereby contribute to raising the level of basic and interdisciplinary research in Norway.
- B. The academic work of the Centre shall be long-term and independent in nature.

An important element in the work of realising these aims is the recruitment of collaborators who can show evidence of international academic results on the highest level. At the same time the Board wishes to encourage the broadest possible co-operation within the framework of the system of thematic research groups. This form of teamwork appears to be functioning extremely well with the size, the academic weight and the youthful constituents (at post-doctoral level) that each group has. The contact between the three subject groups reinforces both the academic and the social sense of community at the Centre. The weekly lunch seminars that were instituted in November 2003 are one of a number of measures introduced to promote such contact. The following seminars had been held up to the expiry of the period covered by this Report:

- 12.11.03: Professor Jerker Rønneberg: "Cognition, Communication and Disability",
- 19.11.03: Professor John Perry: "Self-knowledge",
- 26.11.03: Professor Jonathan Knowles: "Varieties of Naturalism"
- 03.12.03: Professor James J. Elser: "Stoichiometry in Evolution and Disease"
- 10.12.03: Dr. Karen Wiltshire: "Bananas in Helgoland: A Realistic Perspective?"

These seminars will be continued in 2004 and they will constitute a permanent part of the interdisciplinary activity at the Centre.

The subject groups, as they function at the Centre, are unusual in an international context, and many of the leading researchers who have been here, have had very positive things to say about this arrangement.

In the first years of its operation the Centre had to manoeuvre with in very strict financial limitations. In recent years the situation has improved considerably, firstly as a result of the fact that the support provided for the Centre's running costs was brought together under one item in the budget of the Ministry of Education and Research, and subsequently through a considerable strengthening of the provision under this item. The budgetary increase accorded to the Centre in recent years has made possible a considerable reinforcement both of the provision of services to the visiting researchers and of the direct financial support

to the projects. Both factors contribute to making the Centre a more attractive place for outstanding researchers and thereby also to achieving the Centre's aims.

The state grant for 2003 was NOK 13.123 million. Compared to the previous year the increase in state support amounted in real terms to NOK 2.514 million. This increase has taken the Centre a long step in the direction of realising the aim of a grant of a good 15 million 2003-kroner, which the evaluation committee (the Bjørge Committee) had recommended for the Centre as early as 1997. Even though the budgetary limits are still below the level the Board asked for in its budget proposal for 2003, the increase that has been granted is nevertheless a significant movement in the right direction. However, there is still roughly NOK 2 million to go before the contribution from the State is at the level recommended by the evaluation committee seven years ago. The prospects of achieving the evaluation committee's recommendation within a reasonable period of time nevertheless seem to be limited. The national budget passed by the Storting for 2004 puts NOK 13.605 million at the disposal of the Centre, i.e. an increase on the previous year of NOK 473,000, which in the main will compensate for salary adjustments and the general rise in prices. This means that the financial support to the project groups must be frozen at its present level, and that the brakes must be put on the work of building up a collection of books and journals in science and the humanities and also on the provision of IT support for the researchers. This is unfortunate and constitutes a problem in relation to the need for further optimisation of the researchers' working conditions.

The budget increase in 2003 nevertheless made it possible to increase the groups' budgets to approximately NOK 2.5 million each. Seen in relation to the number of man-years this is still a modest sum. As in previous years, however, the agreements with the universities represented considerable additional funding, since visiting researchers from Norwegian universities are paid by their respective universities. The funds made available by the Centre are mainly used to cover project costs, as well as fellowships and salaries for guests from abroad, including expenses relating to accommodation, travel and conferences/seminars. Until recently resources were much too limited to allow a sufficiently large number of really leading international researchers to be brought to Norway. To the extent that the financial circumstances are favourable, the Board will give greater priority to this in

the years ahead. In order to be able to pay for the release of the best researchers from abroad for lengthy research periods at the Centre, experience shows that each of the project groups needs an estimated increase in available funds of around NOK 1 million.

The groups have at their disposal a total of 18 offices (i.e. 6 offices for each group), of which some can accommodate more than one researcher. However, there is at times a shortage of space and it would have been desirable to have a further increase in the number of available offices.

### 3. Research groups and academic activity

The Board continued its work on quality assurance. High quality and broad composition characterised the research groups that worked here in 2003 (see item 4 and the enclosures).

The three groups that started their work in the autumn of the year 2002 continued their projects in the spring of 2003, on the following topics:

- **Geometric Integration** headed by Professor Hans Munthe-Kaas, University of Bergen and Professor Brynjulf Owren, Norwegian University of Science and Technology (NTNU) in Trondheim
- **Aesthetics and Cognition** headed by Professor Jostein Børtnes and Professor Tomas Hägg, University of Bergen
- **Landscape, Law and Justice** headed by Professor Michael Jones, NTNU in Trondheim

The project **Geometric Integration** applied an interdisciplinary approach that used modern abstract geometrical ideas within numerical solutions of differential equations. Geometric integration lies at the point of intersection between pure and applied mathematics, computer science and mathematical physics. It combines ideas from different areas and transforms them into tools for computational mathematics. Research in this area has a number of objectives:

- Geometrical structures are fundamental in the understanding of physical phenomena. In many simulations it is crucial to develop numerical solution techniques that exactly preserve important underlying geometrical structures. Such geometrically exact algorithms have applications in a wide range of different areas such as structural mechanics, robotics

and control theory, molecular dynamics, simulation of particle lattices, celestial mechanics and general relativity. The last years have brought a wide range of different new techniques, but there is still a lot of work to be done in this direction, both pursuing new ideas, and also refining recent ideas and turning them into efficient algorithms and computer programs.

- Object orientation is a fundamental tool in the construction of large software systems involving discrete mathematical structures. It is an important goal to understand and overcome the theoretical and practical difficulties lying in the generalisation of these techniques to areas of mathematics involving continuous mathematical structures and differential equations.
- Through the construction of software, abstract mathematical ideas become more concrete and available to applied mathematicians. Thus a focus on computations and software is contributing to bridging the gap between pure and applied mathematics.

For a more comprehensive presentation of this project, please see page 24.

The project **Aesthetics and Cognition** dealt with the development of a specific anthropology and aesthetic within Christian Orthodox theology from the Cappadocian Church Fathers (4<sup>th</sup> century AD) to Dionysios the Areopagite (c. 500 AD) and Maximus the Confessor (7<sup>th</sup> century AD).

Cappadocian anthropology represented something completely new: it was based on the mystery of the Incarnation, namely that God became man through Jesus Christ. This was the precondition for their doctrine of theosis, i.e. the doctrine that God became man in order that human beings should regain their divine form by shaping their lives as *imitatio Christi*. Byzantine aesthetics was also based on the mystery of the Incarnation and was developed in connection with the theology of the icon or pictorial theology. This aesthetic aspect of Byzantine theology sets it apart from Judaism and Islam, with their prohibition against pictures as well as from Western Christian theology, which did not develop anything equivalent either.

The doctrine of the deification of man has left deep traces in the anthropology of all the Orthodox peoples, not least in Russia. It is for example this anthropology that still determines the representation of the characters in the works of Dostoyevsky and Pasternak. Furthermore

their anthropology and aesthetics are interwoven in a way that has clear parallels in Byzantine art and literature. Against this background the project aimed to study some of the key texts of leading theorists from the early, creative phase of Orthodox theology in order to attempt to clarify the relationship between anthropology and aesthetics in this tradition.

The project's method of approach was interdisciplinary and comprised text studies of history, literature, philosophy and theology in the period from the middle of the 4<sup>th</sup> century to the middle of the 7<sup>th</sup>. For a more comprehensive presentation of this project, please see page 30.

The project **Landscape, Law and Justice** was also interdisciplinary in its design and brought in leading researchers in the fields of geography, history, history of law, sociology and landscape planning. The purpose was to discuss philosophical and theoretical issues concerning law, justice and equity with regard to landscape. The concept of landscape covers a number of different but overlapping ways of understanding the complex relationship between human societies and the physical surroundings. The main focus in this project was the significance of law and custom for the allocation, management and use of common resources. The project was organised around three sub-themes:

- Historical concepts of landscape as an expression of law, justice and cultural practice relating to the community regulation of land and other common resources.
- Continuity and change in the landscape as a physical and cultural manifestation of human activity and institutions, focusing on the role of legislation and customary law, in a historical and geographical perspective.
- Legal implications and landscape impacts of environmental policies for the management of amenity resources and perceived common values in the landscape.

For a more comprehensive presentation of this project, please see page 39.

In the autumn of 2003 the activity started in those groups of researchers who are to work in the period 2003/2004, on the following topics:

- **Food-webs, Stoichiometry and Population Dynamics** headed by Professor Dag Hessen, University of Oslo
- **Towards a Comprehensive Model of Human Memory** headed by Professor Svein Magnussen and Professor Tore Helstrup, University of Oslo
- **Towards a New Understanding of the Mental** headed by Professor Bjørn Ramberg and Professor Olav Gjelsvik, University of Oslo

Newsletters Nos. 1 and 2, 2003 provide an account of these groups' activities. The Newsletters are available in English and Norwegian editions and are to be found on the Centre's Web pages: [www.cas.uio.no](http://www.cas.uio.no)

In June 2003 the Board completed its business relating to the nomination of the researchers who are to head each group in 2005/2006. The number of proposals received was 16, which was more than the year before. The Board chose to invite all the candidates to submit project proposals with a view to further evaluation. After a preceding two-stage perusal of the 16 proposals put forward in the previous autumn, 10 candidates were selected. These were the object of an international peer review in the spring of 2003. The Centre procured a total of 49 evaluation reports from outstanding, independent international researchers, i.e. an average of 4.9 reports per candidate, and this material constituted the basis of the Board's final decision at its meeting in June. It was resolved that the following projects be invited for the academic year 2005/2006:

- **Narrative Theory and Analysis** headed by Professor Jacob Lothe, University of Oslo
- **Environmental Economics: Policy instruments, technology development and international cooperation** headed by Professor Michael Hoel, University of Oslo
- **Statistical Analysis of Complex Event History Data** headed by Professor Odd O. Aalen and Professor Ørnulf Borgan, University of Oslo

In the autumn of 2003 the selection process was begun for 2006/2007. The Centre has received a large number of proposals, a total of 21, which all went further to the next round.

#### 4. Objectives and results

The Board can show evidence of very good academic results during the first eleven years of operations at the Centre. While the first years of operation were hampered by scant resources, the possibilities of realising the Board's ambitious goals have become significantly better in recent years.

The Board also feels that the activities are now being conducted with full recognition by both the Ministry of Education and Research and the Norwegian universities. The good results, according to the visiting researchers themselves, are to a great extent due to the infrastructure, which is appropriately maintained by a very small, but efficient administration. Earlier the workload falling upon the administration was at times very heavy, but the strengthening of the staff with an extra senior executive post in 2002 has significantly improved the situation.

In the spring of 2003, 34 researchers were working at the Centre for long stays (periods of more than one month). Fifteen of our most outstanding Norwegian researchers within 3 main academic areas were working together with 19 international experts. In addition the Centre was the workplace for 10 younger researchers (4 doctoral degree students, 6 post-doctoral research fellows). Altogether 44 researchers contributed written works to the three projects in the spring of 2003. In addition come a very large number of seminar participants who made oral contributions to the projects. (projects, see pages 24–62).

In the autumn of 2003, 22 researchers were working at the Centre for long stays, of whom 14 were leading Norwegian researchers, 8 were researchers from abroad, and 2 were younger researchers (1 doctoral degree student and 1 post-doctoral research fellow). A number of researchers from abroad were also guests at the Centre for shorter periods, i.e. a month or less. The total number of researchers in the autumn semester thus amounted to 34. In addition come a large number of external seminar participants. In the course of the whole period covered by the Report, 78 researchers made written research contributions to the Centre's 6 projects. Researchers from 15 countries in 4 continents had research tasks connected with the Centre in this period.

Major seminars with broad national/international participation have now become a natural part of the academic activity in all the groups. In addition a number of internal seminars were arranged both within and between the groups.

The interaction at the Centre between the researchers from abroad and those from Norway, and the many lectures given by the researchers from abroad at Norwegian universities and in other academic fora (such as the Norwegian Academy of Science and Letters) represent an important contribution to the internationalisation of Norwegian research, and are a significant result in themselves.

As a result of these activities the Board is expecting a number of publications in the form of books, articles in international journals and databases. On account of the long delay before material is printed, it is naturally impossible at the present time to have a complete overview of the results of the work performed in 2003. Some works have already been published, but most of them are either being evaluated, are available in manuscript form or are the object of further treatment. A complete survey of the work carried out in 2003 will not be available for some years. The Board will be working in the years ahead to put in place a better documentation system for this purpose. This has hitherto been somewhat delayed on account of a lack of administrative resources. The reports from the research groups for 2002/2003 show that the provisional number of published reports and/or reports in the course of processing or publication has already reached 124 works. This figure is indicative of considerable productivity, not least in the light of the fact that one of the research groups has still not made public a provisional list of publications.

In addition the following objectives were achieved in the year 2003:

- The academic activity was performed in conformity with the planned result targets.
- The selection procedure for new groups of researchers is now of a high international level and is constantly being improved.
- The Newsletter has now achieved a good form and is of a high quality. It appears twice a year in Norwegian (9500 copies) and English (1000 copies) editions, and is distributed to all those who are working with basic research in Norway, and to researchers from abroad who have been previously affiliated to the Centre.
- Web pages have also been created for the Centre, and these are constantly being further developed and improved.
- Contact with good Norwegian researchers outside Oslo has been improved, and there has been a significant increase in the number of group leaders and project participants from other universities.

- Improvement of the contact with the subject communities in the universities has been realised inter alia though the fact that contact persons have been nominated in all the universities. This arrangement is functioning well and work is in progress to strengthen and develop the contact with the contact committees, among other things through annual meetings between these and the Centre's Scientific Director.
- Initiatives have been taken to extend the co-operation arrangement the Centre has with the four Norwegian universities to include the Norwegian University College of Agriculture and the Norwegian University College of Economics. The purpose is gradually to include all of the heavyweight basic research communities in Norway in this co-operation.
- The excellent, constructive and mutually obligating co-operation with the universities in Norway, the Norwegian Academy of Science and Letters, the Universities and Colleges Council and the Norwegian Research Council was carried further.
- Work on establishing closer contact with international sister organisations was started in 2001 and further developed in 2002 and 2003. Talks on functional/formalised co-operation between the Centre for Advanced Study and the *Swedish Collegium for Advanced Studies in the Social Sciences* in Uppsala have been initiated with a view to strengthening the Nordic component in the international co-operation that is now taking place within inter alia SIAS (Six Institutes of Advanced Studies). The Centre is involved in the work of establishing a European network of institutes of advanced studies – NetIAS.

## 5. Finance

### 5.1 Centre for Advanced Study

From and including the budget year 1999 the former grant from the Research Council of Norway has been included in the grant from the Ministry. The total grant from the Ministry of Education and Research in 2003 was NOK 13,132,000. Beyond this one of the research groups received a direct contribution from NFR amounting to NOK 55,000. In addition the agreements with the universities indirectly brought in considerable resources in the form of approximately 9.5 research man-years. Furthermore the Andrew W. Mellon Foundation in the USA

transferred the sum of NOK 66,211 in accrued interest to the Centre as support for young Eastern and Central European researchers for work at the Centre within the fields of the humanities and 'allied' social sciences. These funds are to be set aside for the time being until researchers from that part of Europe are again affiliated to the Centre. The funds were presumably allocated because the Centre belongs to a group of 14 selected basic research institutions in Western Europe that have been designated as host institutions for the Foundation's fellowship programme directed at Eastern and Central Europe.

The Norwegian Academy of Science and Letters also contributed to relieving the Centre's financial burden in the form of a favourable lease. The lease was renegotiated in 2001 and although the rent was adjusted upwards relatively steeply, it is still moderate in comparison with market prices. Furthermore the Academy has put meeting premises at the disposal of the research groups in return for a small payment.

The Centre's Statement of Accounts for the year 2003 shows a surplus of NOK 2,855,224. The surplus is essentially a result of the fact that the academic year does not follow the budgetary year. The research groups' expenses are normally considerably higher in the spring semester than in the autumn semester. Of this surplus, NOK 780,000 is money that is tied up and will be carried over to the spring semester of 2004, and NOK 1,350,000 is money which has not been distributed but which will be distributed in the spring semester. The Centre's surplus in real terms for the year 2003 was NOK 725,224.

The balance sheet shows a balance of NOK 7,007,551. Of this sum NOK 1,743,207 represents short-term debt, while a good NOK 2,130,000 is, as mentioned, project funding for the groups that has so far not been spent. The Centre's net liquidity at the end of 2003/beginning of 2004 was in other words approximately NOK 3.1 million.

The Accounts were audited by the firm of auditors Nitschke AS. The Accounts for 2003 were produced on the assumption that operations would continue.

## **5.2 The Operating Fund at the Centre for Advanced Study**

The Centre enters into binding agreements for periods up to three years ahead. The Operating Fund was established as a form of security in relation to these long-term obligations. The Operating Fund consists of the basic capital, which is untouchable, and disposable funds. No mon-

ey from the Operating Fund was spent in 2003. Income from interest was NOK 227,384 and this sum was added to the Fund, so that the total capital of the Operating Fund at the end of the year was NOK 6,404,446.

The Accounts were audited by the firm of auditors Nitschke AS. The Accounts for 2003 were produced on the assumption that operations would continue.

Centre for Advanced Study, 11 February 2004

## Accounts 2003 Centre for Advanced Study

<b>Balance at 31 december</b>	2003	2002
<b>Assets:</b>		
<i>Cash:</i>		
Cash, bank deposits etc.	(Note 5) 7 007 551	3 875 278
Other claims	(Note 6)	2 000
<i>Total cash:</i>	<u>7 007 551</u>	<u>3 877 278</u>
<b>Total assets</b>	<b><u>7 007 551</u></b>	<b><u>3 877 278</u></b>
 <b>Liabilities and capital and reserves</b>		
<i>Capital and reserves</i>		
Basic capital	(Note 7) 113 800	112 700
Capital account	5 150 544	2 296 420
<i>Total capital and reserves</i>	<u>5 264 344</u>	<u>2 409 120</u>
 <i>Short-term liabilities</i>		
Payable to the Norwegian Academy of Science and Letters	100 000	100 000
Payable tax deductions, National Insurance contributions, holiday pay etc.	374 618	348 869
Other short-term liabilities	(Note 8) 1 268 589	1 019 289
<i>Total short-term liabilities</i>	<u>1 743 207</u>	<u>1 468 158</u>
 <b>Total liabilities and capital and reserves</b>	 <b><u>7 007 551</u></b>	 <b><u>3 877 278</u></b>

Oslo 11 February 2004

Board of the Centre for Advanced Study

Aanund Hylland,  
Chairman of the Board

Tore O. Vorren,  
Vice-Chariman

Bjørn Tysdahl

Kenneth Hugdahl

Kathrine Skretting

Ann-Kristin Olsen

<b>Profit and loss account</b>	2003	2002
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**Income from operations and running expenses:**

*Income from operations:*

State grant from Ministry of Education and Research	13 132 000	10 618 000
The Research Council of Norway (Note 1)	55 000	50 000
Other contributions (Note 1)	66 211	87 538
<b>Total income from operations</b>	<b>13 253 211</b>	<b>10 755 538</b>

*Operating expenses:*

Expenses relating to research fellows (Note 2)	5 801 109	5 369 360
Salaries, fees etc. (Note 3)	2 058 772	1 806 795
Office furniture, furnishings, computer equipment	448 493	311 780
Other operating expenses (Note 4)	2 281 128	2 597 965
<b>Total operating expenses</b>	<b>10 589 502</b>	<b>10 085 900</b>

<b>Operating result</b>	<b>2 663 709</b>	<b>669 638</b>
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**Financial income and financial expenditure:**

Income from interest	197 332	250 118
Bank charges	5 817	6 715
<b>Net financial income</b>	<b>191 515</b>	<b>243 403</b>

<i>Annual balance</i>	<i>2 855 224</i>	<i>913 041</i>
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which is to be allocated as follows:

To the Basic capital	1 100	1 100
To(from) the Capital account	2 854 124	911 941

**Accounting principles:**

The Accounts have been set out in conformity with the Accounting Act and good accounting practice.

Cash and short-term liabilities normally include items falling due within one year.

Pension premiums are linked to the employer's share of the premium payable to the Public Service Pension Fund.

<b>Notes on the Accounts</b>	2003	2002
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**Note 1 Other contributions:**

The Research Council of Norway	55 000	50 000
Mellon Foundation	66 211	0
University of Oslo - Tibet-Norway Network	0	66 670
Refund of VAT	0	20 868
<b>Total;</b>	<b>121 211</b>	<b>137 538</b>

**Note 2 Expenses relating to research fellows:**

Fellowships etc. researchers	1 869 376	955 846
Rent for researchers' flats	1 525 505	1 527 607
Travel expenses	914 673	788 740
Publications, printing, equipment	388 962	345 750
Seminars/Workshops	995 276	1 454 170
Miscellaneous expenses research groups	107 317	297 247
<b>Total;</b>	<b>5 801 109</b>	<b>5 369 360</b>

**Note 3 Salaries/fees:**

Salaries/holiday pay	1 623 116	1 369 468
Pension premiums	110 751	94 423
National Insurance contributions	241 583	213 559
Manpower services	48 847	74 649
Auditors' fees	32 860	32 860
Social expenditure	1 615	21 836
<b>Total;</b>	<b>2 058 772</b>	<b>1 806 795</b>

The sum of NOK 35,000 was paid out as remuneration to members of the Board Auditing expenses cover in their entirety auditing services

<b>Note 4 Other operating expenses</b>	2003	2002
Lighting, heating, cleaning, rent, insurance, security	585 522	529 941
Telephone, fax, postage	140 124	138 335
Equipment, copying, computing	341 020	430 452
Books, library service, printing	459 738	261 287
Operating equipment, maintenance	188 041	364 415
Running the canteen, social measures, and representation	291 190	221 503
10-year Jubilee	0	300 287
Travel expenses	67 897	105 802
Miscellaneous expenditure	207 596	245 943
<b>Total;</b>	<b>2 281 128</b>	<b>2 597 965</b>

#### **Note 5 Bank deposits**

Of the bank deposits entered in the books, the sum of NOK 113,289 represents withheld tax deductions

Specification of bank deposits on 31.12.:

Sparebanken Nor, account 8200.01.17044	kr	213 736	210 413
Sparebanken Nor, account 1607.83.68385	kr	6 779 164	3 648 605
Sparebanken Nor, account 1644.14.60264	kr	4 324	0
Sparebanken Nor, account 8210.04.35809	kr	1 540	1 540
Total cash in bank	kr	6 998 764	3 860 558
Cash balance 31.12.	kr	8 787	14 720
<b>Total cash, bank etc.</b>	<b>kr</b>	<b>7 007 551</b>	<b>3 875 278</b>

#### **Note 6 Claims**

Claims are put at their nominal value

#### **Note 7 Basic capital**

10% of a calculated yield on the Basic capital throughout the year is allocated to the Basic capital

#### **Note 8 Other short-term liabilities**

This entry consists of items with a time limit at the end of the year.

## Accounts 2003 Operating Fund at the Centre for Advanced Study

<b>Balance at 31 December</b>	<b>Notes</b>	<b>2003</b>	<b>2002</b>
<b>Assets:</b>			
<i>Cash:</i>			
Bank deposit	1	6 404 446	6 177 062
<i>Total cash</i>		<u>6 404 446</u>	<u>6 177 062</u>
<b>Total assets</b>		<b>6 404 446</b>	<b>6 177 062</b>
<b>Liabilities and capital and reserves</b>			
Capital and reserves:			
Basic capital	2	1 251 610	1 228 810
Disposable funds	3	5 152 836	4 948 252
<i>Total capital and reserves</i>		<u>6 404 446</u>	<u>6 177 062</u>
<b>Total liabilities and capital and reserves</b>		<b>6 404 446</b>	<b>6 177 062</b>

Oslo 11 February 2004

Board of the Centre for Advanced Study

Aanund Hylland,  
Chairman of the Board

Tore O. Vorren,  
Vice-Chairman

Bjørn Tysdahl

Kenneth Hugdahl

Kathrine Skretting

Ann-Kristin Olsen

<b>Profit and loss account</b>	2003	2002
<b>Income:</b>		
Income from interest	227 384	383 115
Bank charges	0	0
<b>Annual balance</b>	<b>227 384</b>	<b>383 115</b>

which it is proposed to allocate as follows:

To the basic capital	22 800	38 400
To Disposable funds	204 584	344 715
	<b>227 384</b>	<b>383 115</b>

## Notes on the Accounts for the period ending 31.12.2003

### Note 1 Bank deposit

Specification of bank deposit for the period ending 31.12.2003:

Sparebanken NOR, account 8200.06.22903, balance	kr 6 404 446
<b>Total</b>	<b>kr 6 404 446</b>

### Note 2 Basic capital

The Basic capital has increased by 10 % of the annual yield.

# Geometric Integration

Report by Hans Munthe-Kaas and Brynjulf Owren

## 1. General description

*Geometric Integration* is an interdisciplinary area of research which is applying modern abstract geometrical ideas to the numerical solution of differential equations. Situated at the point of intersection between pure and applied mathematics, computer science and mathematical physics, it is an activity which has in recent years combined ideas from these different fields in a remarkable way and turned them into tools of computational mathematics. Research in Geometric Integration has several goals.

- Geometrical structures are fundamental in the understanding of physical phenomena. In many simulations it is crucial to develop numerical solution techniques that exactly preserve important underlying geometrical structures. Such geometrically exact algorithms have applications in a wide range of different areas such as structural mechanics, robotics and control theory, molecular dynamics, simulation of particle lattices, celestial mechanics and general relativity. The last years have brought a wide range of different new techniques, but there is still a lot of work to be done in this direction, both pursuing new ideas, and also refining recent ideas and turning them into efficient algorithms and computer programs.
- Object orientation is a fundamental tool in the construction of large software systems involving discrete mathematical structures. It is an important goal to understand and overcome the theoretical and practical difficulties lying in the generalization of these techniques to areas of mathematics involving continuous mathematical structures and differential equations.

- Through the construction of software, abstract mathematical ideas become more concrete and available to applied mathematicians. Thus a focus on computations and software is contributing to bridging the gap between pure and applied mathematics.

Detailed information is to be found on the Web pages of the project:  
<http://www.focm.net/gi/oslo0203/>

## 2. Participants

The following persons participated in the project for a period of more than two weeks:

PhD student Håvard Berland (NTNU), Jan. – June '03.  
 Dr. Elena Celledoni (NTNU), Aug. '02 – June '03.  
 Prof. Des Higham (Strathclyde), Apr. – May '03.  
 Prof. Arieh Iserles (Cambridge), Sep. '02 and Jan. '03.  
 PhD student Stein Krogstad (UiB), Aug. '02 – June '03.  
 Prof. Ben Leimkuhler (Leicester), Jan. '03.  
 Prof. Robert McLachlan (Massey, New Zealand), Aug. '02 – June '03.  
 PhD student Borislav Minchev (UiB), Dec. '02 – June '03.  
 Dr. Per Chr. Moan (UiO), Jan. – June '03.  
 Prof. Hans Munthe-Kaas (UiB), Aug. '02 – June '03.  
 Prof. Bojan Orel (Ljubljana), Oct. – Dec. '02.  
 Prof. Brynjulf Owren (NTNU), Aug. '02 – June '03.  
 Prof. Reinout Quispel (LaTrobe), Jan. – June '03.  
 Dr. Will Wright (Auckland), Jan. – June '03.  
 Dr. Antonella Zanna (UiB), Aug. '02 – June '03.d

In addition to these, a number of people visited the Centre for shorter periods: Prof. Chris Budd (Bath), Dr. Fernando Casas (Castellon), Dr. Simone Fiori (Perugia), Dr. Jason Frank (Amsterdam), Prof. Ernst Hairer (Geneva), Prof. Jialin Hong (Beijing), Prof. Peter Hydon (Surrey), Assoc. Prof. Anne Kværnø (NTNU), Prof. Laurent Jay (Iowa), Dist. Prof. Tien-Yen Li (Michigan), Prof. Syvert Nørsett (NTNU), Prof. Peter Olver (Minnesota), Dr. Matt Perlmutter (Caltech), Prof. Meng-Zhao Qin (Beijing), Prof. Sebastian Reich (Imperial College), Dr. Mark Sofroniou (Wolfram Research), Dr. Giulia Spalletta (Bologna), Dr. Krister Åhlander (Uppsala).

### 3. Conferences, workshops and seminars

Within the scope of the GI special year, four workshops were arranged:

- *Summer school in GI*, Fevik, Aug. 19–23 2002, 23 participants.
- *Oscillatory problems, Lie group methods and their linear algebra*, Sørnæsset, Sep. 13–17 2002, 11 participants.
- *MaGIC – Manifolds and Geometric Integration Colloquium*, Rondablikk, Feb. 23–28 2003, 18 participants.
- *Geometric and structure preserving algorithms for PDEs*, CAS, May 12–15 2003, 30 participants.

More details concerning the participants and programme are to be found on the Web pages of the project.

The Fellows of the GI programme participated in a large number of international conferences during the year, Munthe-Kaas organized a mini-symposium in GI at *Foundations of Computational Mathematics*, Minnesota, Aug. '02, and Owren chaired the International Conference *SciCADE* in Trondheim in July '03 (ca 200 participants). All these activities contributed to making the results of the GI programme known to the international research community.

Weekly seminars were held at the CAS during the year with a combination of speakers from within and outside the programme. More details are to be found on the project's Web pages.

### 4. Publications and results

The publication list below contains the reports/ journal articles that had either been commenced or completed by the participants of the GI special year.

The year has been a great inspiration to the participants, and the project has been an important event within the applied mathematics and scientific computing communities in Norway. The advances achieved point in various directions. The most important scientific contributions from this year will be easier to pinpoint in a few years' time. A summary of some directions pursued is given below.

- Advances of basic Lie group integrators (LGI) and their analysis. This is a class of algorithms that have been studied by our research community for 7–8 years. During the GI special year, advances were made in the analysis and optimization of several of the basic algorithms.
- Advances towards applications of LGI on PDEs. Most of our earlier studies were directed towards Ordinary Differential Equations. The advances towards applying the methods on Partial Differential Equations might be one of the most important developments during the year. We are now seeing these kinds of methods entering into more large-scale computing problems in engineering and computational physics.
- *Improved understanding of non-commutative B-series.* B-series is a fundamental tool for analysing time integration schemes, which have surprising connections to renormalization theory in physics and optimal control theory. While the classical theory of B-series is a commutative theory, the structure underlying LGI is a non-commutative theory. The algebraic structure of non-commutative B-series became well understood during the year in Oslo.
- *Advances in symplectic integration and other algorithms in computational mechanics.* Several research reports pushed the knowledge of structure preserving integration of Hamiltonian systems further.
- *Advances in linear algebra algorithms.* Structure preserving algorithms in Linear Algebra is an area of active research, and work was done in several directions, such as optimizing the number of commutators, computations of matrix exponentials and fast computable coordinates on matrix Lie groups.

## Publications:

K. Åhlander and H. Z. Munthe-Kaas: “The general Fourier transform applied to equivariant linear systems.” In preparation.

B. Minchev and I. Ivanov: “A method for solving hermitian pentadiagonal block circulant systems of linear equations.” In: *4th International Conference on Large-Scale Scientific Computations*, Sozopol, Bulgaria, 2003.

B. Minchev and W. Wright: “Exponentially based Runge Kutta methods for stiff problems.” In preparation.

H. Berland and B. Owren: “Algebraic structures on ordered rooted trees and their significance to Lie group integrators.” Submitted for publication.

- H. Berland, B. Owren, and B. Skaflestad: "Fourth order time integration of the nonlinear Schrödinger equation." In preparation.
- F. Casas and B. Owren: "Cost efficient Lie group integrators in the RKMK class." Accepted for publication in BIT.
- E. Celledoni: "Eulerian and Lagrangian schemes based on commutator-free exponential integrators." Submitted for publication.
- E. Celledoni and S. Fiori: "Neural learning by geometric integration of reduced 'rigid body' equations." Technical Report 04/02, NTNU, 2004.
- E. Celledoni and E. Rønquist: "A semi-Lagrangian scheme for the numerical solution of convection diffusion equations." In preparation.
- M. Haverlaen, H. Munthe-Kaas, and K. Åhlander et al.: "Abstractions in scientific computing." Chapter in Dagstuhl book on Modern Software Techniques for Scientific computing. Eds. U. Ruede et al. In preparation.
- D. Higham: "Spectral reordering of a range-dependent weighted random graph." Submitted for publication.
- D. Higham and A.S. Melbø: "Numerical simulation of a linear stochastic oscillator." To appear in *Applied Numerical Methods*.
- Iserles and A. Zanna: "Efficient computation of the matrix exponential by Generalized Polar Decompositions." To appear in *SIAM J. Num. Anal.*, 2004.
- Iserles and A. Zanna: "On the spectra of certain matrices generated by involutory automorphisms." To appear in *SIAM J. Matrix Anal.*, 2004.
- R. Kozlov, A. Kværnø, and B. Owren: "The behaviour of the local error in splitting methods applied to stiff problems." To appear in *J. of Comp. Phys.*, 2004.
- S. Krogstad: "Generalized integrating factor methods for stiff nonlinear PDEs." To appear in *J. Comp. Phys.*
- S. Krogstad: "RKMK-related methods for stiff nonlinear PDEs." To appear in *Appl. Num. Math.*
- S. Krogstad and H. Z. Munthe-Kaas: "On enumeration problems in Lie-Butcher theory." *Future Generation Computer Systems*, 2003.
- S. Krogstad, H. Z. Munthe-Kaas, and A. Zanna: "Generalized polar coordinates on Lie groups and numerical integrators." Submitted for publication.

E.L. Mansfield and G.R.W. Quispel: "Towards a variational complex for the finite-element method." Submitted for publication.

R. I. McLachlan and G.R.W. Quispel: "Splitting polynomials." In preparation.

R. I. McLachlan and A. Zanna: "The discrete Moser–Veselov algorithm for the free rigid body, revisited." Submitted for publication.

R.I. McLachlan, M. Perlmutter, and G.R.W. Quispel: "On the nonlinear stability of symplectic integrators." Accepted for publication.

P.C. Moan: "On the KAM and Nekhoroshev theorems for symplectic integrators and implications for error growth." To appear in *Nonlinearity*, 2004.

P.C. Moan, G.R.W. Quispel, M. Sofroniou, and G. Spaletta: "Symplectic elementary differential Runge-Kutta methods." Submitted for publication.

P.C. Moan, G.R.W. Quispel, and G. Spaletta: "Some invariance theorems for one-step integration methods and their consequences for B-series methods." Submitted for publication.

H. Z. Munthe-Kaas and W. Wright: "A hitchhiker's guide to Lie-Butcher theory." In preparation.

B. Orel: "Accumulation of global error in Lie group methods." Submitted for publication.

B. Owren: "Order conditions for commutator-free Lie group methods." In preparation.

G.R.W. Quispel, H.W. Capel, and J.A.G. Roberts: "Integrable OEs derived from soliton equations have a dual." In preparation.

# Aesthetics and Cognition. The Development of an Anthropology and an Aesthetic in Early Byzantine Theology

Report by Jostein Børtnes and Tomas Hägg

## 1. General description

The aim of the project was to study the development of a specific anthropology and aesthetic within Christian Orthodox theology. The project was centred on the Cappadocian Church Fathers (4th century AD), in particular Gregory of Nazianzus, and their impact on subsequent Byzantine theologians, such as Dionysios the Areopagite (c. AD 500) and Maximus the Confessor (7th century AD).

Cappadocian anthropology represented something new: it was based on the mystery of the Incarnation and on the theology of the Trinity as it was worked out by the Cappadocians. A central concern of the project was the role of the Cappadocians for Byzantine aesthetics and the theology of the icon, an aspect of Orthodox tradition that sets it apart from Judaism and Islam as well as from Western theology.

The Orthodox doctrine of the deification of man has left deep traces in the anthropology of all Orthodox peoples, not least in Russia; in the novels of Dostoevsky and Pasternak, for instance, this idea still determines the representation of the characters. By studying key texts of these leading Greek thinkers, the project set out to illuminate the relationship between anthropology and aesthetics in the early Orthodox tradition.

For this purpose, we brought together an international group of experts on various aspects of the period from the mid-fourth to the mid-

seventh century AD: history, literature, philosophy, and theology. Each of us singled out for study a limited set of Greek texts central to our aims – with the three Cappadocians as the key authors – and worked intensively with these texts, both individually and in interaction with the other members of the group, studying the constitutive concepts and their background and development.

Our work was thus first and foremost based on the study of texts. Our stated ambition was not to arrive at a totally new and comprehensive picture of this creative phase in the history of Orthodox theology, but rather to amplify, differentiate, and put into perspective the picture outlined briefly above.

The results of our collective work will be presented in an international publication, containing separate studies by the members of the project, enclosed between an introduction which defines the common aims (by the editors), and an epilogue which brings the threads together and discusses the wider implications (by Philip Rousseau). In addition to the contributions of the members of the basic team, the book will also include chapters written by scholars invited to present their studies at our international symposium in May 2003 or in our colloquia held throughout the academic year at the Centre. The book is in preparation and will be published in 2004 by the Museum Tusulanum Press (Copenhagen) under the (preliminary) title *Gregory of Nazianzus: Images and Reflections*, eds. J. Børtnes & T. Hägg.

Apart from contributing towards the common goal, the participants were also encouraged to pursue other studies of their own free choice during their stay at the Centre. We considered it important that the unique period of undisturbed research in a congenial setting that an extended stay at the Centre means could also be utilized for the kind of individual long-term projects that most academics in the humanities foster but usually have little time to develop in the daily routines of teaching and administration. The details will emerge from the following list of participants and research activities. It goes without saying that the informal discussion of these “other” research undertakings within patristic studies was an added bonus for all during this richly privileged year.

## 2. Participants and research activities

*Jostein Børtnes* (Professor of Russian Literature at the University of Bergen) concentrated his research around the rhetoric of Gregory of Nazianzus and on his concept of the divine image. He presented the

paper “God’s Icon – EIKON THEOU: On the Prehistory of Orthodox Iconology” at Icons: An International Symposium, 27–28 March 2003, Nationalmuseum, Stockholm, and the communication “Eikōn theou: Meanings of Likeness in Gregory of Nazianzus,” at the Patristic Conference, Oxford, 18–23 Aug 2003. Contributions to the book: “Introduction” (with T. Hägg) and “Rhetoric and mental images in Gregory of Nazianzus”.

*Tomas Hägg* (Professor of Classical Philology at the University of Bergen) focussed his work within the project on Hellenism in Gregory of Nazianzus, with special reference to his commemorative speeches on Basil and three members of his own family. He also worked on the translation into Swedish of these funeral speeches to be published with commentaries (in collaboration with J. Børtnes and S. Rubenson, Artos Förlag: Skellefteå). He was invited to present the project and his own topic to the *Collegium Patristicum Lundense* in March. Contributions to the book: “Introduction” (with J. Børtnes) and “Playing with the expectations: Gregory’s funeral orations on his brother, sister and father”

*Andrew Louth* (Professor of Patristic and Byzantine Studies at the Department of Theology, University of Durham) worked within the project on the influence of St Gregory Nazianzus and Dionysios the Areopagite on Byzantine Aesthetics, especially St Maximos the Confessor. Contribution to the book: “The appeal to the Cappadocian Fathers and Dionysios the Areopagite in the Iconoclast controversy”.

*John A. McGuckin* (Professor of Church History at Union Theological Seminary and Professor of Religion at Columbia University in New York) spent much of the time researching on the manner in which Gregory of Nazianus approached the medium of poetry, as a vehicle of inspiration, reappropriating this ancient Hellenistic concept (rehabilitating it after the Platonic deconstruction of the idea) and applying it in the new environment of Christianity. He was also able to work on the final sections of his new book, *The Westminster Handbook to Patristic Theology*, an encyclopaedic research tool for students of the subject (Westminster-John Knox Press: Louisville, KY, forthcoming 2004). Contribution to the book: “Gregory of Nazianzus: The rhetorician as poet”.

*Hugo Montgomery* (Professor emeritus of Classical Philology at the University of Oslo) continued to work on his project “Rhetoric and Leadership in Antiquity” from Demosthenes to S. Cyprian. He adopted a new approach to these problems when he took up the study of one rather neglected speech by S. Gregory of Nazianzos, “S. Gregory, *Oratio* 24 – A Disaster or a Rhetorical Masterpiece?” (article in progress).

*Edgars Narkevics* (Lecturer in Ancient Philosophy at the University of Latvia) carried out research into the philosophical background of Cappadocian theological rhetoric, focusing on a highly original theory of concepts implicit in the polemical and dogmatic works of the Cappadocian Church Fathers, and comparing it with a semantic theory of meaning elaborated in the ancient commentaries on Aristotle’s logical treatises. This study resulted in a draft for a monograph about the place of the Cappadocian theology in the philosophical tradition of late Hellenism. Part of the research was presented in two papers discussed in the colloquia of the research group at the CAS: “The problem of ‘Platonic influence’ on the Cappadocian doctrine of Trinity” (in progress) and “The ambiguous use of causal terms in Gregory of Nazianzus’ doctrine of divine ‘monarchy’” (in progress). Contribution to the book: “*Skiagraphia*: Outlining the conception of God in Gregory of Nazianzus’ *Theological Orations*”.

*Frederick Norris* (Dean E. Walker Professor of Church History and Professor of World Mission/Evangelism at the Emmanuel School of Religion, Johnson City, TN) examined the bond between aesthetics and theology in the work of Gregory the Theologian. Contribution to the book: “Gregory the Theologian contemplating the beautiful: Knowing human misery and divine mystery through and being persuaded by images”.

*Eustratios Papaioannou* (Assistant Professor of Greek and Latin at the Catholic University of America, Washington, DC) worked on two closely related studies: one was dedicated to the interaction of literary theory and self-presentation in the work of Gregory of Nazianzus, the other to the influence of Gregory on Byzantine literary production, especially that of the 10th–12th centuries. As a result of his stay at the CAS he produced one article and one review: “Der Glasort des Textes: Selbstheit und Ontotypologie im byzantinischen Briefschreiben (10. und 11. Jh.)”,

in W. Hörandner, J. Koder, and M. Stassinopoulou (eds.), *Vierzig Jahre Institut für Byzantinistik und Neogräzistik der Universität Wien: Wissenschaftliches Symposium im Gedenken an Herbert Hunger* (Vienna, 2004) (forthcoming); Review of B. Coulie (ed.), *Studia Nazianzenica I*, in *Jahrbuch der österreichischen Byzantinistik* 53 (2003) 282–288. He also worked extensively on a forthcoming monograph, *The Rhetorical Autography of Michael Psellos: Mimesis in Pre-modern Greek Literature* (projected publication: 2005). Contribution to the book: “Gregory of Nazianzus and the constraint of sameness”.

*Philip Rousseau* (Andrew W. Mellon Professor of Early Christian Studies at the Catholic University of America, Washington, DC) translated into English sermons 10 and 11 of Basil of Caesarea, *Hexaëmeron*, and prepared a paper, “Human Nature and its Material Setting in Basil of Caesarea’s Sermons on the Creation”, which was delivered to the International Conference on Patristic Studies at Oxford in August 2003. The two enterprises may contribute to an eventual book on the *Hexaëmeron*. He worked and lectured (in Oslo and Lund) on Gregory of Nyssa’s Life of Macrina, material that will contribute to another current book project, *Ascetics and Social Formation*, and he completed a substantial amount of work as editor of the Blackwell *Companion to Late Antiquity*. Contribution to the book: “Closing Reflections”.

*Samuel Rubenson* (Professor of Church History at the University of Lund) worked on a study of the image of Athens in the Cappadocian fathers, analyzing the character and function of references to classical Athens, to the visit of St. Paul to Athens, and to Athens of their own days, in the writings of Basil of Caesarea, Gregory of Nazianzus and Gregory of Nyssa. In addition to his contribution to the symposium and book, results of his work at the CAS will be included in a larger volume on Athens in the Church Fathers, which is a work in progress. Contribution to the book: “The Cappadocians on the Areopagus”.

*Torstein T. Tollefsen* (Associate Professor of Philosophy at the University of Oslo) worked on the concept of divine activity (*energeia*) in cosmology and soteriology in the Cappadocian Fathers and St Maximus the Confessor, for a monograph in progress with the title: *Generation, Creation, Transformation – A Study in the Doctrine of Divine Energeia*. Contribution to the book: “Theosis according to St Gregory the Theologian”.

### 3. Conferences, workshops and seminars

#### 3.1 Colloquia

We considered it an important part of our activities at the Centre to give the scholarly milieu in the Oslo area insight into our project and the occasion to meet and listen to our international guests, both those participating in the project and others whom we invited for shorter stays. Therefore we made most of our project colloquia open to the public. The open colloquia were regularly held on Tuesday evenings in the seminar room of the Centre in the Academy's building at Drammensveien 78. Invitations were sent out a week in advance by e-mail to about fifty addresses and each colloquium was attended by ten to fifteen people. There were often lively and fruitful discussions.

There follows a list of speakers and topics, with the specially invited guest speakers marked with an asterisk:

- Edgars Narkevics: "The problem of 'Platonic influence' on the Cappadocian doctrine of Trinity"
- Torstein Tollefsen: "Translation of Maximus the Confessor: *Quaestiones ad Thalassium* 60, 'On the mystery of Christ' – discussion of first draft"
- Eustratios Papaioannou: "Michael Psellos on Gregory of Nazianzus and the re-interpretation of Mimesis"
- Edgars Narkevics: "The ambiguous use of causal terms in Gregory Nazianzen's doctrine of divine 'monarchy': logical error, rhetorical paradox or reflection on a philosophical problem?"
- \*Christos Simelidis (University of Oxford): "Gregory of Nazianzus, *carm.* I. 2. 17 (PG 37. 781–6): the experience of editing and commenting"
- Samuel Rubenson: "The Cappadocian Fathers on the Areopagus: interpretations of Acts 17 in Basil, Gregory of Nyssa and Gregory of Nazianzus"
- Jostein Børtnes: "The problem of *eikôn theou* in Gregory of Nazianzus"
- Torstein Tollefsen: "*Theiôsis* according to Gregory of Nyssa and Basil"
- Philip Rousseau: "Ascetics and Social Formation"

- Andrew Louth: “The Influence of Gregory the Theologian and Dionysios the Areopagite on later Byzantine aesthetics”
- \*Kate Cooper (University of Manchester): “Spectacle, Representation, and the Hellenic Heroine: from Heliodorus to the Cappadocians”
- \*László Török (Hungarian Academy of Sciences and Letters): “Portraying the Holy: Aspects of Late Antique Painting in Egypt”. With comments by Professor emeritus Hjalmar Torp (University of Oslo)
- Hugo Montgomery: “From Magician to Bishop – St Cyprian in St Gregory of Nazianzus, *Oratio* 24”
- \*Susanna Elm (University of California Berkeley): “Gregory’s Women: Creating a Philosopher’s Family”
- \*Stephanos Efthymiadis (University of Ioannina): “The Greek Biographies of St Gregory of Nazianzos”
- Philip Rousseau: “Aesthetics and Cognition in Basil of Caesarea’s Hexaëmeron X and XI”

### 3.2 Patristic Workshop

In order to make the international expertise in Patristic studies gathered at the CAS available to younger students in the field as well, we invited a number of Nordic research students in patristic studies to the CAS for a two-day Patristic Workshop (11–12 April 2003), led by Jostein Børtnes, Tomas Hägg and Samuel Rubenson. The following topics were presented and discussed:

- Nanna Liv Olsen (Denmark): “Aesthetics, Erotics and Matter in Plotinian Mysticism – Metaphors of Passivity, Nonintentionality and Interpenetration”
- Ari Ojell (Finland): “The constitutive elements of the apophatic system of Gregory of Nyssa”
- Karl Johan Skeidsvoll (Bergen): “The ideal bishop as portrayed by St. Gregory of Nazianzus: orations 21 and 43”
- Charles Lock (Copenhagen): “The Rhetoric of the Icon: on Sameness and Likeness” (lecture)
- Henrik Rydell Johnsén (Lund): “John Climacus, *Ladder of divine ascent*”
- Kristina Alveteg (Lund): “Creating a Holy Space of Healing: Romanos the Melodist and ‘Mary at the Cross’”

- David Westberg (Uppsala): “Literary aesthetics in the time of Justinian”
- Anne Karahan (Stockholm): “The dichotomy between economy and theology and its theological impact on Byzantine iconography and aesthetics”

Further participants: Kari Elisabeth Børresen (Oslo), Eyólfur Kjalar Emilsson (Oslo), Andrew Louth, Hugo Lundhaug (Oslo), Hugo Montgomery, Edgars Narkevics, Jan Olof Rosenqvist (Uppsala), Philip Rousseau, Per Rönnegård (Lund) and Torstein Tollefsen.

### 3.3 International Symposium

The principal presentation and discussion of the results of the project took place in our four-day international symposium at Solstrand Fjord Hotel outside Bergen (21–25 May). We had a double motive for choosing this particular venue for our main scholarly and social event: we knew from experience that this place, in its magnificent natural setting, is ideal for the kind of gathering we had in mind, relaxed yet intensively engaged in scholarly exchange; and we considered it important that the foreign members of our project got acquainted with Bergen and Western Norway as well as with Oslo and its surroundings.

In addition to the members of the project, we had invited three further international experts on Gregory of Nazianzus to deliver papers (marked with an asterisk in the list), and a number of Nordic scholars and research students to take part in the symposium. Speakers, topics and guests are listed below.

“Gregory of Nazianzus: the Theologian, the Hellenist, the Man”

*Speakers and topics:*

- Frederick W. Norris: “Contemplating the beautiful in Gregory the Theologian: human misery and divine mystery known through and persuaded by images”
- Jostein Børtnes: “God’s icon – *eikon theou*: on the prehistory of Orthodox iconology”
- Edgars Narkevics: “*Skiagraphia*: outlining the conception of God in Gregory Nazianzen’s *Theological Orations*”
- Torstein Tollefsen: “*Theosis* according to St Gregory the Theologian”

- \*Robin Darling Young (Catholic University of America): “Evagrius of Pontus as son of Gregory of Nazianzus: ‘encountering dark teachings in the desert’”
- Eustratios Papaioannou: “Gregory of Nazianzus and the constraint of sameness”
- \*Virginia Burrus (Drew University): “The martyrdom of Gorgonia and the birth of female hagiography”
- \*Neil McLynn (Keio University): “Among the Hellenists: Gregory and the sophists”
- Samuel Rubenson: “The Cappadocians on the Areopagus”
- Tomas Hägg: “Gregory’s funeral speeches on his brother, sister and father: literary aspects”
- John McGuckin: “Gregory the Theologian’s theology of culture: the intentionality of the poetry”
- Philip Rousseau: “Summing-up”

Invited guests: Christine Amadou (Oslo), Vemund Blomkvist (Oslo), Kari Elisabeth Børresen (Oslo), Tor Hauken (Bergen), Sten Hidal (Lund), Henny Fiskå Hägg (Agder University College), Knut Erling Johansen (Oslo), Charles Lock (Copenhagen), Hugo Lundhaug (Bergen), Hugo Montgomery (Oslo), Øyvind Norderval (Tromsø), Karl Johan Skeidsvoll (Bergen), and as day guests from the University of Bergen: Ingvild Sælid Gilhus, Liv Ingeborg Lied and Ingunn Lunde.

#### 4. Evaluation

As stated above, an important part of the year’s work and discussion within the project will be assimilated into individual monographs and articles by the members of the project, some of which have already been published or are being printed (cf. the list of Participants and research activities above). With regard to the goals of the project as a whole, it is difficult at this point in time to assess in a meaningful way the overall results reached during our stay at CAS. A first assessment is only possible when the various contributions to our joint publication on Gregory of Nazianzus have been worked through and analysed; the introduction and epilogue to the book will involve attempts at a synthesis. In addition, we have included in our project, and our budget, a follow-up conference in two years’ time. This will be the proper occasion for a more comprehensive evaluation of our contribution to a deeper understanding of the anthropology and aesthetics of the Cappadocians.

# Landscape, Law & Justice

Report by Michael Jones

## 1. General description

The term landscape incorporates a number of differing but overlapping ways in which the complex relationships between human societies and their physical surroundings are conceptualized. The particular focus in this project was the role of law and custom for the allocation, management and use of common resources. The project was organized around three sub-themes:

1. Historical concepts of landscape as an expression of law, justice and cultural practice relating to the community regulation of land and other common resources (cf. the medieval Nordic *landskapslover*, i.e. the provincial laws or “landscape laws”).
2. Continuity and change in the landscape as a physical and cultural manifestation of human activity and institutions, focusing on the role of legislation and customary law, in a historical and geographical perspective.
3. Legal implications and landscape impacts of environmental policies for the management of amenity resources and perceived common values in the landscape.

The core group within the research theme on Landscape, Law & Justice brought together researchers in the disciplines of geography, legal history, sociology and landscape planning. Besides working on their individual research projects, the group came together at regular intervals to discuss philosophical and theoretical issues concerning law, justice and equity with regard to landscape. Other invited researchers from both Norway and outside Norway joined the group for periods lasting from a week to a month. The group organized a programme of monthly seminars, workshops and symposia on topics related to this

field of research. Seminars involved presentations by members of the group as well as by invited speakers. The majority of the seminars were open for participation by other interested persons. Two of these meetings were held outside Oslo: a symposium organized in conjunction with the Nordic Sami Institute in Kautokeino in March, and a seminar organized on Karmøy in May. The year ended with an international conference at the Norwegian Academy of Science and Letters in June. In addition to the disciplines already mentioned, the meetings organized by the group included participants from the disciplines of anthropology, archaeology, architecture, botany, cultural heritage management, economics, ethnology, history, landscape architecture, law, philosophy, and philology. The 120 papers presented at the seminars, workshops and conferences, with good time allowed for discussion, led to stimulating exchanges of ideas. Many of these ideas are reflected in more than 80 publications, either already published or forthcoming, presenting the work undertaken by the group while at the Centre for Advanced Study. We would like to thank the Centre for giving us the opportunity of coming together during the academic year 2002–2003.

## 2. Participants

### *The research group:*

- Professor Michael Jones (Department of Geography, Norwegian University of Science and Technology (NTNU), Trondheim, Norway) (leader)
- Professor Erling Berge (Dep. of Sociology and Political Science, NTNU, Norway)
- Professor Ari Lehtinen (Dep. of Geography, University of Joensuu, Finland)
- Professor emeritus David Lowenthal (Dep. of Geography, University College London, England)
- Professor Kenneth Olwig (Dep. of Landscape Planning, Swedish University of Agricultural Sciences, Alnarp, Sweden)
- Dr. Tiina Peil (Dep. of Geography, NTNU, Norway)
- David Sellar (Faculty of Law, University of Edinburgh, Scotland)
- Dr. Gunhild Setten (Dep. of Geography, NTNU, Norway)
- Professor Hans Sevattal (Dep. of Landscape Planning, Agricultural University of Norway, Ås, Norway)

- Professor Mats Widgren (Dep. of Human Geography, Stockholm University, Sweden)
- Kari Stuberg (Master student, Dep. of Geography, NTNU, Norway)

*Visiting researchers (short stays):*

- Gabriel Bladh (Dep. of Human Geography, Karlstad University, Sweden)
- Katrina Myrvang Brown (Macaulay Institute, Aberdeen, Scotland)
- John Gerrard (formerly Scottish Civic Trust, Glasgow, Scotland)
- Margaret Mackay (School of Scottish Studies, University of Edinburgh, Scotland)
- Karen Fog Olwig (Dep. of Anthropology, University of Copenhagen, Denmark)
- Helen Sooväli (Dep. of Geography, University of Tartu, Estonia)
- Maud Wedin (Dep. of Human Geography, Karlstad University, Sweden)
- Wille Östberg (Dep. of Human Geography, University of Stockholm, Sweden)

### 3. Conferences, workshops and seminars

The following seminars, workshops, symposia and conferences were organized by the *Landscape, Law & Justice* group:

#### 3.1 Introductory seminar, CAS, 16–21 August 2002

Participants: Michael Jones, Kenneth Olwig, Ari Lehtinen, Erling Berge, Gunhild Setten, Mats Widgren, Hans Sevatdal, and David Sellar.

Topic: Presenting results of own research.

#### 3.2 “Landscape”, CAS, 3–4 October 2002

Debates about landscapes often evolve around representations of landscape (e.g. a picture, a painting or a map) and what is represented (the landscape ‘out there’). The relationship between the representation and the represented is circular – they are mutually constitutive. This fact does not, however, solve complicated questions such as whom and what are represented? How can landscapes represent us? These are questions of

justice, of what we find good or fair, or maybe bad or unjust in the landscape. Differing institutions regulate our senses of justice in the landscape. Such institutions are often legal bodies that employ juridical means that apply to all of us within e.g. a national territory. At the same time we have strong senses of embodied justice that are situated within local, customary rules and regulations. Differing senses of justice tend to produce differing landscapes. The result is often alienation and exclusion. These were issues explored during the seminar.

- Hans Sevattal: “Landscape planning and the understanding of landscapes”
- Michael Jones: “The power to define a concept – cultural landscape as an example”
- Gunhild Setten: “Landscapes as moral territories”
- Don Mitchell (Dep. of Geography, University of Syracuse): “Political landscape and social justice”
- Kenneth Olwig (CAS): “Landscape as body politic – a Nordic perspective on landscape”

### 3.3 “Custom, Law and Landscape”, open seminar, CAS, 11–13 November 2002

The seminar focused on the relationships between custom, customary law and law as they pertain to landscape. Central were the formal and informal institutions that regulate the use of land. Questions addressed were: What is the relationship between *habitus* and custom? What are the differences between custom and tradition? When do customs become customary law? What are the interrelationships between customary law, common law and statutory law? These questions were discussed in relation to land tenure and land rights in the broadest sense, and illustrated with examples from concrete research. An applied aspect of this concerned problems related to the formalization and registration of land rights, a topical matter in many third-world as well as Eastern European countries. Formalization of land rights in third-world countries is seen as a prerequisite for land transactions. In Eastern Europe the registration of land rights is important for the settlement of land claims and private property restitution after the collapse of Communism. Among aspects of interest in negotiations over customary usage and rights to property and resources are issues of gender and of relationships between different ethnic groups.

- Kenneth Olwig (CAS): “*Habitus*, custom and tradition”
- David Sellar (CAS): “Customary law, common law and statute: a cautionary tale”
- Michael Jones: “The role of village and neighbourhood institutions for the regulation of land and shaping of the landscape in Norden: a historical overview”
- Hans Sevattal (CAS): “Land registration, formalization and entitlement”
- Ingrid Nyborg (Noragric, Agricultural University of Norway): “Women’s rights and the formalization of land rights in Baltistan”
- Mats Widgren (CAS): “The landscape (=scenery) of formalised land rights on a hill in Marakwet region, Kenya”
- Erling Berge (CAS): “Designing law”
- Peeter Maandi (Dep. of Economic and Human Geography, Uppsala University): “Memory and land restitution in Estonia.”

### 3.4 “Justice and Just Environments”, open seminar, CAS, 5–6 December 2002

Experiences of justice and injustice are basic motivations for human action. What is their origin? Based partly on readings of works by John Rawls and Mary Douglas, among others, this seminar took up questions of justice, equity and equality in relation to landscape and the environment. Topics of interest included: environmental justice; public rights of amenity versus private land and property rights; nature’s rights and animal rights; gender, ethnicity, citizenship, nation and landscape.

- David Lowenthal (CAS): “Intergenerational equity and future stewardship”
- Inger Birkeland (Telemarksforskning): “Caring justice? A feminist view of environmental justice”
- Sven Arntzen (Høgskolen i Telemark): “Race/ethnicity, environment and self-determination”
- Ari Lehtinen (CAS): “Just geography? Environment, justice and community in the era of translocalization”
- Per Ariansen (Dep. of Philosophy, University of Oslo): “When is it appropriate to fly the colours of justice?”
- Erling Berge (CAS): “Some reflections on institutions and justice”

### 3.5 “Meanings: The Dialectics of Language and Landscape”, open seminar, CAS, 15–17 January 2003

The relationship between language and landscape is dialectical. We employ language, e.g. terms, categories and classifications, in order to give meaning and direction to landscapes and places; vice versa, our terms would be meaningless when seen apart from what we classify as landscapes and places. Not only does language provide meaning to landscapes, language also annexes landscapes. The relationship between language and landscape is hence complex, but crucial in order to understand how notions of law and justice in the landscape come about. Language is also one of the most important means by which we can identify change, not least with regard to how we come to understand how landscapes are used and given meaning. The seminar examined ways in which concepts and terms, categories and classifications relating to landscape, law and justice have developed through the practice of those who use the land and through the activities of scholars and lexicographers. Objects of interest were etymologies, encyclopaedias, dictionaries, place-name collections etc. related to the field of landscape, law and justice. The emphasis was less on the technical aspects of compilation and definition, but more on the social and historical contexts within which such activities are conducted, and how this influences our understanding of the phenomena concerned. The seminar focused on meanings in two contexts:

- 1) Place-names and landscape. What is the purpose of place-name collections? What do they tell us of the relationship between people and landscapes? Do they have hidden or open ethnic or national agendas?
  - 2) Landscape, law and justice in etymologies, dictionaries and lexicons. What are the motives of those compiling lexicons of various types? What guides selection? What tensions exist between the descriptive and normative function of lexicons? How are etymologies derived? What do disciplinary dictionaries tell us of the debates within disciplines? What power relations are embedded in the compilation of dictionaries?
- Doreen Waugh (School of Scottish Studies, University of Edinburgh): “Names and claims in Orkney and Shetland”
  - Gunhild Setten (CAS): “Naming and claiming discourse: the practice of landscape”
  - Gabriel Bladh (Dep. of Human Geography, University of Karlstad): “Landscapes and storytelling: place names in Finnskogen, Värmland, Sweden”

- Stefan Brink (Dep. of Archaeology and Ancient History, Uppsala University): “The cognitive landscape”
- Tiina Peil (CAS): “Land into shape: Finno-Ugric and Scandinavian (Indo-European) ideas of landscape”
- Arne Torp (Dep. of Scandinavian Studies and Comparative Literature, University of Oslo): “Etymology: a foggy landscape?”
- Kenneth Olwig (CAS): “Dictionaries and etymologies as a methodological approach in landscape geography”
- Michael Jones (CAS): “Udal law, Norwegian odel and Finnish aiti (=mother) – reflections on a concept”
- David Sellar (CAS): “Birlaws, moots and landscape”

*Internal seminar:*

- Kari Stuberg (CAS): “Museum som historieforteller – Narrativets betydning for vår oppfattelse av landskap og folk i Sapmi [The museum as a relater of history – the significance of narratives for our understanding of landscape and people in Sapmi].”

### 3.6 “Commons: Old and New”, open workshop, Villa Krusesgate, 11–13 March 2003

The theme of the workshop was commons, institutional theory and landscape. By comparing the system of commons of Scotland, Sweden, Navarre (Spain) and Norway on the basis of institutional theory, the workshop examined different forms of community control of land. Concepts discussed included different forms of public, private and individual property, and the interaction of property regimes and regulatory regimes. Relevant questions concerned outdoor recreation and public access in relation to private property rights, and private rights of common in relation to public rights of common on the one hand and private, individual rights to land on the other.

- Kenneth Olwig (CAS): “Commons and landscape”
- Maud Wedin (Dep. of Human Geography, Karlstad University): “Forest Finns vs. Swedish commons”
- Ulf Jansson (Dep. of Human Geography, Stockholm University): “The institutional geography of early modern Swedish commons”
- Klas Sandell (Dep. of Human Geography, Karlstad University): “The right of public access in Sweden: a history of modernization and a landscape perspective”

- Mercedes Pardo (Dep. of Sociology, Public University of Navarra): “New commons: social perception of the environment in Navarra (Spain)”
- Nuria Oses Eraso (Dep. of Economics, Public University of Navarra): “The commons in Navarra: Urbasa, Andía and Limitaciones”
- Frode Gundersen (Dep. of Economics and Social Sciences, Agricultural University of Norway): “Three Norwegian *bygd* commons: Sják, Espedalen and Oppdal *bygd* commons”
- Hans Sevatdal (CAS): “Norwegian commons in perspective”
- Audun Sandberg (Bodø Regional University): “Commons for whom? On new coastal commons on North Norwegian coasts”
- Katrina Myrvang Brown (Macaulay Institute, Aberdeen): “Historically enduring commons in Scotland: institutional arrangements and implications for landscape”
- David Sellar (CAS): “Community rights and access to land in Scotland”
- Per Otnes (Dep. of Sociology and Human Geography, University of Oslo): “A tale of two commons”
- Lars Carlsson (Luleå Technical University): “Managing commons across levels of organization” (read by Erling Berge)
- Andrew Humphries (Colinsay House, Ivegill, Carlisle): “Ancient lands cast long shadows – the case for reconnection with English commons for sustainable management and use”

### 3.7 Kautokeino Symposium: “Landscape, Law and Customary Rights”, Kautokeino, 26–28 March 2003

The object of the symposium was to discuss different approaches to understanding landscape, with the aim of providing a more multi-dimensional approach to landscape than that which often characterizes the approaches found in official administration and management.

- Kirsti Strøm Bull (Dep. of Law, University of Oslo/Nordic Sami Institute): “Samisk sedvanerett og forslag fra Samerettsutvalget [Sámi customary rights and proposals from the Sámi Law Committee]”
- Kenneth Olwig (CAS): “The landscape of the land’s custom, contra that of the state’s territory”
- Erling Berge (CAS): “Why are property rights to land important? A dynamic perspective”

- Bjørn Bjerkli (Dep. of Anthropology, University of Tromsø): “Place/time relations and customary land use”
- Ari Lehtinen (CAS): “Whose land? The question of justice in Finnish wilderness politics”
- Mats Widgren (CAS): “Wilderness, landscape and justice: the African experience”
- Nils Johan Päiviö (Nordisk Sami Institute): “Från Skattemannrätt till Privilegium odiosum [From property rights to Privilegium odiosum]”
- David Sellar (CAS): “The Highland Clearances and the Scottish Land Court”
- Michael Jones (CAS): “Seasonal landscapes”
- Kaisa Rautio Helander (Nordic Sami Institute): “Báikenameid virggálaá atnu Davvi-Norggas, ja sámii báikenameid árbevirolaá atnu ovdal ja dál [Official use of place names in Northern Norway, and traditional use of Sámi place names in the past and present]”
- Svanhild Andersen (Dep. of Anthropology, University of Tromsø/Nordic Sami Institute): “Stedsnavn og stedsdannelse [Place names and place-making]”
- Tiina Peil (CAS): “Relations with land – roots, rights and reflections”
- Jens-Ivar Nergård (Faculty of Social Sciences, University of Tromsø): “The sacred landscape”

### 3.8 Internal seminar, CAS, 8 April 2003

- Michael Jones (CAS): Introduction to the Centre for Advanced Study and the *Landscape, Law & Justice* project
- Margaret A. Mackay (School of Scottish Studies, University of Edinburgh): Presentation of the School of Scottish Studies
- John Gerrard (formerly of the Scottish Civic Trust, Glasgow): (1) Presentation of the Scottish Civic Trust; (2) “The Lottery Fund and its importance for financing cultural heritage and museums in Scotland”
- Gabriel Bladh and Maud Wedin (Dep. of Human Geography, Karlstad University): “Research on Forest Finns in Sweden”
- Wille Östberg (Dep. of Human Geography, University of Stockholm): “Landscape perception and land use in Marakwet, Kenya”
- Erling Berge, Mats Widgren, Tiina Peil, Gunhild Setten (CAS): Presentations of own research
- Venke Åsheim Olsen: “John Francis Campbell – a 19th century geologist, folklorist and traveller linking Scotland, Norway and Finland”
- Michael Jones (CAS): Presentation of own research

### 3.9 “Cultural and Natural Heritage”, Open workshop, Villa Krusesgate, 22–24 April 2003

Heritage is the portmanteau term used to denote anything and everything we suppose, rightly or wrongly, has been handed down to us from the past. Although heritage is by no means uniformly desirable, it is widely viewed as a precious and irreplaceable resource, crucial to personal and collective identity and necessary for self-respect. Hence we go to great lengths, often at huge expense, to protect and celebrate the heritage we already possess, to find and enhance what we feel we need, and to restore and recoup what we have lost. What comprises heritage differs greatly with culture and over time, but it is everywhere deeply implicated in what we think of, and do with, land, law, and justice. On the basis of the participants’ knowledge of and experience with local, national, and global heritages, the seminar addressed the themes of nature and culture, material and intangible heritage, conflict and cooperation, preservation and creativity, and public and private heritage.

- Bosse Sundin (History of Ideas, Umeå University): “Nature as heritage – the Swedish case”
- Werner Krauss (Dep. of Anthropology, Hamburg University): “Natural and cultural landscape heritage in northern Friesland”
- Tiina Peil (CAS): “Heritage connection – land and/or people: an Estonian case from the Pakri peninsula and islands”
- Marc Laenan (Heritage Centre of Limburg): “Visions of the development of cultural landscapes: recent new approaches in Belgium”
- Anthony Pace (Cultural Heritage, Malta): “Heritage: notes from a small place”
- Tomas Germundson (Dep. of Human and Economic Geography, Lund University): “Heritage in a disputed national landscape: the Scanian case”
- Gunhild Setten (CAS): “Landscapes and cultural heritage sites: public values in private places”
- Per Kristian Skulberg (Farm owner, Skulberg): “Heritage as a personal, familial and national/world inheritance: the case of Skulberg, Spydeberg”
- Peter Howard (International Journal of Heritage Studies): Commentary
- Dag Myklebost (Directorate for Cultural Heritage, Oslo): “Hierarchy of values”
- David Lowenthal (CAS): “Sharing and shearing: culling and sustaining the global heritage flock”

### 3.10 Karmøy Seminar: “Law, Custom, Biodiversity and Landscape Protection”, Karmøy, 13–16 May 2003

The seminar focused on issues related to biodiversity, law, customary rights, and landscape protection. The links between biological and landscape diversity on the one hand, and local customary rights and related cultural practices on the other hand, were explored. The topic was examined in relation to changes resulting from external influences, including changing economic conditions and the role of environmental and other related government policies. Questions addressed included: What do different groups (e.g. scientists, conservation agencies, local people) understand by biological diversity? How is biological and landscape diversity related to cultural complexity? How do customs and local institutions change in response to external economic conditions, and in response to environmental, agricultural and forestry policies? How do changes in cultural practice affect land use and hence biological and landscape diversity?

- Kenneth Olwig (CAS): “Custom, social reproduction and shaping of grazing lands”
- Gunilla A. Olsson (Dep. of Biology, NTNU): “Biodiversity conservation – is it worthwhile, and for whom?”
- Mary Edwards (Dep. of Geography, Southampton): “Biodiversity values and conservation – the ecologist’s role”
- Kerstin Potthoff (Dep. of Geography, NTNU): “Changing relations between custom, law and ownership”
- Sebastian Eiter (Dep. of Geography, University of Bergen): “Farmers and tourists – custom, law and landscape protection”
- Anders Lundberg (Dep. of Geography, University of Bergen): “Landscape transformation at Lindøy (Karmøy) 1955–2003 – a response to changes in land ownership and customary law”
- Field trip on Karmøy, led by Anders Lundberg. Study topics: (1) Protection of heathland: conflict between landowners, local authorities and country conservation authorities. (2) Sandhåland: a biodiversity hotspot through 250 years of landscape change. (3) Lindøy: from farming to recreation – landscape development and management challenges. (4) Kongsgården Avaldsnes and Olavskyrkja: plans for a national cultural heritage centre
- Gabriel Bladh (Dep. of Human Geography, Karlstad University): “Processes and practice in forestry landscapes: planning ideologies in relation to landscape planning in forestry”

- Jørgen Klein (Hedmark University College/ Dep. of Geography, NTNU): “Conservation discourses, natural management and local people in Ambohitantely, Madagascar”
- Siren Sælemyr (Dep. of Geography, NTNU): “People, park and plant use – perception and use of ‘nature’ – case study from a national park in Ecuador”

### 3.11 Norwegian Geographical Society: Theme Meeting on “Landscape, Law & Justice”, Norwegian Academy of Science and Letters (NASL), 26 May 2003

- Michael Jones (CAS): “Rettsgeografi – landskap, lov og rett [Legal geography – landscape and law]”
- Erling Berge (CAS): “Miljøvern i teorien om allmenninger [Environmental conservation in the theory of commons]”
- Gunhild Setten (CAS): “Landskap og sted – hvem eier begrepene? [Landscape and place – who owns the concepts?]”
- Mats Widgren (CAS): “Kan man läsa markrättigheter ur landskapet? Ett exempel från Marakwet i Kenya [Can one read land rights from the landscape? An example from Marakwet in Kenya]”

### 3.12 International Conference: “Landscape, Law and Justice”, NASL, 15–19 June 2003

The conference presented ideas developed by members of the *Landscape, Law & Justice* group as well as by others working in this area of research.

- (Keynote speaker) Anne Whiston Spirn (Dep. of Urban Studies and Planning, Massachusetts Institute of Technology, USA): “Environmental justice and community design and development: the West Philadelphia project”
- Tor Arnesen (Eastern Norway Research Institute, Lillehammer, Norway): “The way to go: to do it, to get it, to policy it. On theory of landscapes”
- Kenneth Olwig (CAS): “Ground Zero: landscape, emplaced law and just diversity”
- Ari Lehtinen (CAS): “Green regimes? The concern of justice in local-global environmentalism”
- Ralph Heiefort (Centre for Public Sector Research, Göteborg University, Sweden): “Citizenship and territorialization”

- Hannes Palang (Dep. of Geography, University of Tartu, Estonia): “Ideology and tradition in landscape change – is there a traditional landscape? A case of Helme, Estonia”
- Tiina Peil (CAS): “National landscapes of Estonia – the sum and its parts”
- Gabriel Bladh (Dep. of Human Geography, Karlstad University, Sweden): “Processes and practices in forestry landscapes: planning ideologies in ecological landscape planning in forestry”
- Jørund Aasetre (Nord-Trøndelag Research Institute, Steinkjer, Norway): “INON –the history of a Norwegian wilderness indicator”
- Karoline Daugstad (Centre for Rural Research, Trondheim, Norway): “Challenging the definition of Nature: the case of a new management regime on protected nature in Norway”
- Ingegerd Holand (Directorate for Cultural Heritage, Oslo, Norway): “Reality – theory – practice: incorporating academic concepts into heritage management”
- Fiona Mackenzie (Dep. of Geography and Environmental Studies, Carleton University, Canada/ The Arkleton Centre for Rural Development Research, University of Aberdeen, Scotland): “Re-imagining the land, North Sutherland, Scotland”
- Gunhild Setten (CAS): “Who owns the concepts? Discourses of landscape and place”
- Tom Mels (Dep. of Humanities and Social Sciences, Kalmar University, Sweden): “Land, water and the palatial justice of landscape: The Low Countries around 1600”
- Katrina Myrvang Brown (Macaulay Institute, Aberdeen, Scotland): “*Common grazings* or common *grazings*: the actualisation of common property rights in post-productivist rural spaces”
- Erling Berge (CAS): “Environmental protection in the theory of the commons”
- Nathalie Lewis (Paymar, Cemagref, Bordeaux, France): “Environmental laws: when traditional land rights come up against recent patrimonial objectives! Field study on alluvial landscape protection in the Middle Loire watershed (France)”
- Morten Edvardsen (Dep. of Landscape Planning, Agricultural University of Norway): “The third alternative: a nature conservation partnership model at work on Svanøy”
- Terje Skjeggedal (Nord-Trøndelag Research Institute, Steinkjer, Norway): “The Planning and Building Act outside urban areas: unbounded ambitions – limited possibilities”

- Jan Åge Riseth (NORUT Social Science Research, Tromsø, Norway): “Nature conservancy and recreation policies’ impacts on an indigenous resource management practice. Some perspectives on the case of Sámi reindeer management in Balvatn, Northern Norway”
- Armands Vilciņš (Faculty of Geography and Earth Sciences, University of Latvia): “Changes of human pattern in Taurene parish, Latvia”
- Nancy J. Volkman (Dep. of Landscape Architecture and Urban Planning, College of Architecture, Texas A&M University, USA): “The long-term effects of Spanish colonial planning on North American land rights: the case of San Antonio, Texas”
- Sebastian Eiter (Dep. of Geography, University of Bergen, Norway): “Farmers and tourists – custom, law and landscape protection”
- Kerstin Potthoff (Dep. of Geography, NTNU, Norway): “Changing relations between custom, law and ownership”
- Frode Gundersen (Dep. of Economics and Social Science, Norwegian Agricultural University, Ås, Norway): “Between community tradition, modern forestry and modern environmental management – local institutions and the management of common property in the mountain region and forestry regions in the Southern Norway in the 1990s”
- Elizabeth Gräslund Berg (Dep. of Human Geography, Stockholm University, Sweden): “Medieval glebes – Canon Law in the Swedish Landscape”
- Michael Jones (CAS): “Law and landscape – some historical-geographical studies from Northern Europe”
- (Keynote speaker) Nicholas Blomley (Dep. of Geography, Simon Fraser University, Canada): “Landscapes of property: collective claims to urban land”
- David Lowenthal (CAS): “Possession and community: insular exemplars”
- Rakmani Gounder (Dep. of Applied & International Economics, Massey University, New Zealand): “Land rights, ethnicity and conflict: a case study of Fiji”
- Anders Lundberg (Dep. of Geography, University of Bergen, Norway): “Landscape transformation at Lindøy (Karmøy municipality) 1955–2003 – a response to changes in land ownership and customary law”
- Helen Sooväli (Dep. of Geography, University of Tartu, Estonia): “Coping with landscapes – survival strategies of the Setu and Saaremaa people in Estonia”

- David Sellar (CAS): “A castle and its landscape: the case of Castle Tirrim”
- Marie Stenseke (Dep. of Human and Economic Geography, Göteborg University, Sweden): “Biodiversity and the local context. The role of semi natural pastures and perceptions about them in some rural Swedish areas”
- Mats Widgren (CAS): “Under what conditions can property rights be read in the landscape?”
- Karl Martin Born (Dep. of Geographical Science, Free University of Berlin, Germany): “Justice in the East German restitution process?”
- Sigrid Hedin (Dep. of Social and Economic Geography, Uppsala University, Sweden): “Land restitution in Estonia in the 1990s: a case study of five villages in the former Swedish settlement area”
- Peeter Mandi (Dep. of Social and Economic Geography, Uppsala University, Sweden): “Landscape and land restitution in Estonia. Geographical patterns of national history and individual memory”
- Poul Wisborg (Centre for International Environment and Development Studies, Noragric, Ås, Norway): “‘Certain rural areas’: constructing and reconstructing an apartheid landscape in Namaqualand, South Africa”
- Nic Olivier (SADC Centre for Land-related, Regional and Development Law and Policy, Post-Graduate School of Agriculture and Rural Development, University of Pretoria, South Africa): “Transformation of communal land tenure in South Africa”
- Gregory Taff (Dep. of Geography, University of North Carolina, USA): “Land use and land Change as a result of land restitution in Gauja National Park, Latvia”

#### 4. Publications

The following publications, including those in press or forthcoming, are derived from work undertaken in whole or in part at the Centre for Advanced Study:

Berge, Erling. 2003. “Improving biodiversity policy: what do we need to know?” In *Actes des Journées de l’Institut français de la biodiversité. Tours, 18–20 décembre 2002 Biodiversité: quels enjeux pour les sociétés?*, 25–30. Paris: IFB. <http://www.gis-ifb.org>

Berge, Erling. 2003 “Forskningspolitikk, kollegial kritikk og eigedomsrett til kunnskap om genar” [Research policy, collegial critique and the right to ownership of knowledge about genes]. *Kronikk. Forskerforum* 2003:3, 24–25.

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