

## Research Group on Manuscript Evidence

THE PARKER LIBRARY  
CORPUS CHRISTI COLLEGE  
CAMBRIDGE CB2 1RH

*Director:* Prof. R.I. Page  
*Co-Director:* Dr M.O. Budny  
*Research Associate:* T.C. Graham  
*College Librarian:* Dr N. Wilkins  
*Conservation Officer:* N. Hadgraft  
*Archivist:* Mrs C.P. Hall  
*Research Consultant:* Dr L.J. French

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15 December 1993

### Image-Processing and Manuscript Studies: A Workshop

We will hold a workshop on Saturday 15 January devoted to techniques of image-processing as aids for manuscript studies. We will consider developments in imaging through photographic and computerised methods.

The workshop seeks to provide a forum for information and feedback about techniques of image-enhancement, both existing and planned: applications, capabilities, limitations, desiderata, and future potential. It is hoped that participants will include experts in manuscript studies, conservation, photography, imaging aids, computing, radio astronomy, engineering, medical research, forensics and image-enhancement.

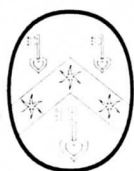
We aim to run the workshop on informal lines, as a round table. This will give plenty of opportunity to respond to the speakers and ask questions. We hope that specialists in various fields will report their experience with problems related to imaging. We intend to publish the proceedings, which will be taped so as to include both the reports and discussions.

Mildred Budny and Leslie French (Research Group on Manuscript Evidence) will report their initial explorations at the Parker Library, and describe some specific questions or ranges of questions which might be considered. Examples of problem passages for which we seek advice include: erasures; palimpsests; burnt portions; liquid damage (notably ink lakes); passages damaged by rust-burn marks, holes and/or reagents; elements added or altered in different inks; drypoint glosses (notably in superimposed layers); passages affected by corroded pigments or show-through; multiple damage through exposure, liquid, rubbing and other means; and offsets of ink and pigments from pages now lost.

Tony Parker (British Library) will survey examination equipment for deciphering documents, including microscopy, boroscopy, fibre-optic lighting and the Video Spectral Comparator. Chris Bacon (Keith Johnson & Pelling) will report on developments in lighting techniques for photography. Malcolm Dennett (Keith Johnson & Pelling) will survey developments in photographic equipment and film emulsion technology. Kevin Kiernan (University of Kentucky at Lexington) and Andrew Prescott (British Library) will report on the digitisation, restoration and dissemination of manuscripts, notably in the project to prepare an electronic facsimile of the badly burnt *Beowulf* Manuscript (British Library, Cotton MS Vitellius A. xv).

Graham Woan (Cavendish Laboratory, University of Cambridge) will apply a radio-astronomical perspective on imaging problems in manuscripts. Joan Lasenby (Department of Engineering, University of Cambridge) will survey standard techniques of image-enhancement in various fields, including contrast-enhancement, histogram equalisation, adaptive histogram equalisation and application of filters; and also will report on plans for future techniques, applying some

Associates: D. Baker (Texas), C.T. Berkhout (Tucson), D.H. Farmer (Reading), C.E. Fell (Nottingham),  
共同研究者 M.R. Godden (Oxford), O. Gründler (Kalamazoo), C.A. Hough (Nottingham), S.L. Keefer (Ontario),  
S.D. Keynes (Cambridge), T. Kubouchi (Tokyo), V.A. Law (Cambridge), A.R. Rumble (Manchester),  
G. Russom (Providence), S. Sato (Tokyo), T.H. Seiler (Kalamazoo), C.P.E. Springer (Illinois),  
P.E. Szarmach (Binghamton), T. Takamiya (Tokyo), D.M. Wilson (Isle of Man), C.P. Wormald (Oxford)



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model-based deconvolution techniques (for example from physics), morphological filters, classification techniques and data-fusion techniques. This will include projects both planned and in progress, based on, among others, examples from Parker Library manuscripts. Anthony Hugget (Department of Engineering, University of Cambridge) will demonstrate some of these techniques on computer.

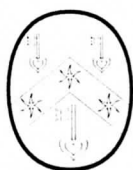
Selected medieval manuscripts in the Parker Library will be available for examination during the workshop, to demonstrate problem passages which call for image-enhancement. Among them will be MSS 23, 44, 111, 173, 183, 201, 422 and 557. There will also be an exhibition of photographs and enhanced images, including cases from both the British Library and the Parker Library. We are preparing a group of modern samples using medieval-type inks on vellum, to give control samples and cases exposed to heat, light and other forms of damage.

The workshop will meet in the Parker Library. We will begin at 10 a.m., break for lunch and continue until about 5:30 p.m. Because the College no longer provides lunches on Saturdays we have to adjourn for lunch in town. Alas, we must ask our participants to contribute to the cost of lunch, as our Research Group funds cannot cover it. To let us know whom we may expect, please fill out the enclosed form and return it to me as soon as possible.

Invitations are sent to: R.I. Page, Mildred Budny, Tim Graham, Nicholas Hadgraft, Leslie French, Ian Cannell, Malcolm Dennett, Chris Bacon, Nick Phillips, Alan Philby, Graham Woan, Anthony Lasenby, William Fitzgerald, Joan Lasenby, Anil Kokohan, Alex Stark, Anthony Hugget, Yusuke Takeuchi, Peter Greenhouse, Kevin Kiernan, Michael Borrie, Roy Russell, Tony Parker, Andrew Prescott, Dave French, John Bennett, Mike Weston, Nigel Ramsay, Michelle Brown, Toshiyuki Takamiya, Malcolm Godden, Christine Fell, Kathryn Lowe, William Stoneman, Paul Szarmach, Jeremy Griffiths.

Also informed: Nigel Wilkins, Mirjam Foot, Robert Fuchs, Doris Oltrogge, Cheryl Porter, Stephen Best, Nancy Turner.

Mildred Budny



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To: Dr Mildred Budny  
The Parker Library  
Corpus Christi College  
Cambridge CB2 1RH

I ☐ will be able to attend the seminar on Saturday, 15 January  
☐ will not

Signed .....