BULLETIN
CSHPM/SCHPM

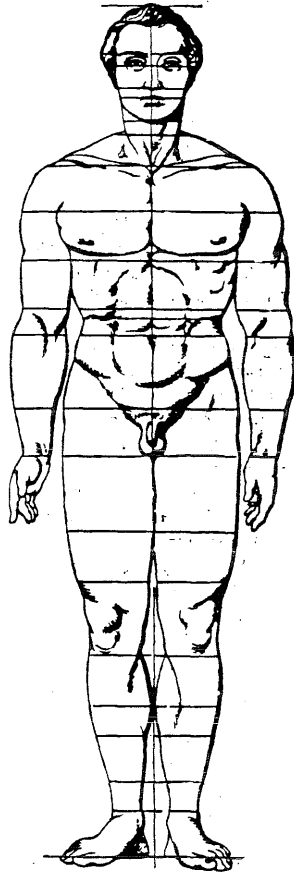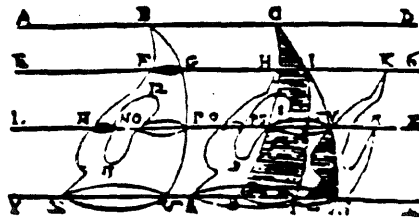214   FIG. 49.   FIG. 50.

The Mathematics of Nude Men

Canadian Society for History
and Philosophy of Mathematics

Société canadienne d'histoire et
de philosophie des mathématique

The Bulletin is an informal medium whose aim is to inform
members of the CSHPM\SCHPM, and others interested in the history
and philosophy of mathematics, of happenings, meetings, current
research work, publications etc. and to provide a place where one
can present tidbits, historical problems, quotations etc. which
do not find a place in more formal media.

CSHPM/SCHPM

The society is international in outlook and membership. Its
purpose is to unite scholars who are interested in the history
and philosophy of mathematics.

Annual dues are $15 ($US 11).

If a subscription to Historia Mathematica (the official journal
of the society) is desired the additional cost is $29.50 ($US 22)
i.e. a total of $44.50 ($US 33). A subscription to Historia
Mathematica via CSHPM represents a considerable saving over the
usual cost.

Remittances should be sent to:

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Department of Mathematics, Concordia University,
7141 Sherbrooke Ouest, Montréal, Quèbec, H4B-1R6
tel. (514)848-3232
Electronic mail address: MAMALIK@CONU1.CA

Kindly include your electronic mail address if you have one.
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ANNUAL MEETING

University of Victoria

May 31, June 1 1990

The programme of this meeting is printed in this Bulletin.
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The Canadian Mathematics Education Study Group

Groupe Canadien d'étude en Didactique des Mathématiques

will meet from May 25 to May 29 at

Simon Fraser University, Burnaby, B.C.

(Attention: this meeting is not at Victoria!)

The programme of this meeting is printed in this Bulletin.

There will be a Joint Session of the CSHPM/SCHPM and CMESG/GCEDM

on the topic

History and Pedagody / Histoire et Pédagogie

at the University of Victoria

starting at 9:00 Thurs. May 31

The programme of this joint meeting is printed in this Bulletin.

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COVER

The cover is taken from Adolph Zeising's 1854 book <u>Neue Lehre von</u>
<u>den Proportionen des menschlichen Körpers, aus einem bisher un-</u>
<u>erkannt gebliebenen, die ganze Natur und Kunst durchdringenden</u>
<u>morphologischen Grundgesetze entwickelt und mit einer voll-</u>
<u>ständigen historischen Übersicht der bisherigen Systeme be-</u>
<u>gleitet.</u> This was the work that started "golden numberism" which
may be defined as the disease which causes those infected with it
to find the "golden number" everyplace and anyplace. In the cover
diagram Zeising is indicating - via terms from the Fibonacci
sequence - the golden number relationships in the human body. In
particular he believed that the naval was at the golden number
position with respect to the total height. Ironically despite
Zeising's insistence ("New system of proportions ....hitherto un-
known...") that he had discovered the principle of the golden
number, later writers "found" (even though it did not exist) the
golden number in the works of artists etc. predating Zeising.

CURRENT RESEARCH

Not having received a current research submission, I immodestly
decided to write about myself. - Roger H-F.

Craig Fraser's description in the last issue of the <u>Bulletin</u> of
is in some ways the antithesis of my path although in other ways
there are similarities. He started at Carleton and ended up at
Toronto and I did the opposite (I taught there 1965-70); we did
not know each other at Carleton. In both cases we had virtually
no contact with the history of mathematics at the the first uni-
versity. I taught a history of mathematics course for high school
teachers during my first years at Carleton, but this had nothing
to do with my later interest. Nor does a virtually non-existent
interest in the subject on the part of my colleagues at Carleton
have anything to do with it.

In 1972 I was asked to take over a mathematics course for a ar-
chitecture students. The chairman's instructions were simply
"Keep them happy [so that we do not lose the course]." Having
been given freedom, I decided to read and lecture on the "golden

number" (which I had vaguely heard about) and its relationship to Le Corbusier's Modular system of architecture and the Great Pyramid. I had a sabattical in 1975-76 and before I left I decided to write a short book for architecture students. The first chapter was to be on proportions in architecture, in particular on the GN. Now talking in class is one thing and writing is another and so I decided to obtain precise references. As a consequence of this I spent my sabbatical, not on "Mathematical Models of Jewish Intermarriage" as had been my intention, but doing research which led to three articles in art history journals (on Seurat, Gris, Le Corbusier) and on the mathematical theories of the Great Pyramid (see the Proceedings of the 1989 CSHPM meeting).

Subsequently I: a) wrote an apology to my former architecture students for having taught them complete garbage and b) decided to write a book on the GN. As part of this book I decided to include material on the strictly mathematical-historical aspect of the GN. This led to the period (c. 1978-88) when I did research in history of mathematics in its usual form. I seem to have joined the CSHPM around 1975-76, and gave my first talk in 1980 at UQAM. The main results were my book A Mathmtical History of Division in Extreme and Mean Ratio (Wilfrid Laurier, 1987) and what I consider my best piece of work: "Theorem XIV, ** of the First 'Supplement' to the Elements" (Archives Internationales d'Histoire des Sciences, 38 #120 (1988), 3-66. As the original title " The Case of the Missing Theorem" indicates I enjoy unraveling historical puzzles.

I am now at work on the second GN book (the last, although originally there was to have been a third which collected all the mathematical results) in which I go back to the original topic of golden numberism (i.e. the aesthetic and non-mathemtical aspects of the GN). This work will be entitled The Golden Number: A Philosophical, Historical, Sociological and Analytical Study and it is not going to be a short book. As the term "sociological" indicates I am interested in how the myth of the GN spread and why artists etc. became so interested in this mathemtical quantity. My approach to this can be seen in my article "Le Corbusier's 'Regulating Lines' for the Villa at Garches (1927) and Other Early Works", J. of the Society of Architectural Historians, 43 (1984), 53-59.

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Note: Readers will excuse the paucity of material in this issue. I received virtually nothing this year from members, be it about publications or meetings. Indeed most of the information came from other bulletins or non-members. There is a need for more co-ordination and for people who will take charge of obtaining information about various topics of interest to our members. Because I have in charge of the Bulletin for four years I haved decided to retire from the position. I wish to thank all those who have sent me material and to Craig Fraser for having taken care of the printing and mailing of these last two issues. Roger H-F.

REPORT ON THE FEBRUARY CFH MEETING

The Board of Directors of the Canadian Federation for the
Humanities met in Ottawa for a full day of discussion on Feb. 2,
1990. The morning session was taken up with a very enlightening
discussion of financing learned societies, and one of the most
effective presentations was made by a man from the Society for
Aesthetics who said that the only way to get out the of position
of continually complaining about how little we get from the gov-
ernment is to register with Ottawa as a charity and raise money
to support our activities. It is interesting that several soci-
eties have done this, to what is evidently their considerable
satisfaction. It might be a good idea to have a discussion on
this at our forthcoming meetings in Victoria.

One major topic in the afternoon was the discussion of the recom-
mendation of the Aid to Scholarly Publications Committee that the
funding formula used to subsidize scholarly publications be re-
vised so that there would now be a base grant of $3,500, a promo-
tion grant of $1,500 (to help raise the profile of scholarly
books from Canada), plus 20% of typesetting and printing costs.
Books with a print run of more than 3,000 copies will not be eli-
gible for these subsidies. These recommendations were approved,
but there was considerable discussion on whether the amount for
publicity should be increased. In the end the motion was passed
as is.

The motion to increase the membership fees for societies (such as
ours) belonging to the CFH was approved unanimously. Consequently
the fees we pay CFH will rise to $6.00/member for 1990-91 and
$7.00 per member for 1991-92. This will bring our fees into line
with those of our sister organization, the Social Science
Federation of Canada.

Obviously CSHPM/SCHPM will have to pass these increasing fees on
to its membership - much as we would like to be able to absorb
the cost. (Maybe we will become a charity and a certain portion
of members' contributions will then be legally tax-deductible.)
An impassioned plea was made at the end of the meeting for SSHRC
to make a major effort to increase the number of scholarships
available in the social sciences and humanities for doctoral stu-
dents. To judge from the response this plea got at the meeting it
obviously struck a responsive chord in the hearts of the repre-
sentatives there from the various humanities organizations. The
depressing details on the current situation are in the Fall, 1989
issue of the Bulletin of the CFH (obtainable, I am sure, from
your local Dean of Arts office), an issue by the way that has
much of interest for all those concerned with the welfare of the
humanities in this country. - Len Berggren

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ACTIVITIES OF OTHER SOCIETIES

Ivor Grattan-Guinness former president of the British Society for the History of Mathematics reports that their membership has increased by c. 100 (to 320) over the past year. Membership is 7 pounds.

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CITATIONS/QUOTES

"J'exprime ces forces par une courbe, qui en met la loi sous les yeux et par une équation algébrique qui en fait voir l'unité et la regularité je demonte positivement l'existence de cette loi."
- Rudger Boskovic, Philosophiae naturalis theoria redacta ad unicam legem virium in natura existnetium, Vienne, 1758, p. 534. Cité dans Jean Dhombres, "Boskovic aux prises avec le calcul différentiel: art nouveau des inégalités et pratiques anciennes."; version préliminaire.

"When I dare to speak of mathematics in Art I am smiled as if I were crazy. In our society mathematics is placed in opposition to Art just as science is to religion." - Paul Sérusier ABC de la peinture [3rd edition] suivie d'une correspondance inédite.] Paris: Floury, 1950, P. 92.

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PUBLICATIONS

Fraser, Craig. "Review of A Source Book in Mathematics, 1200-1800 by Dirk Struik." The Mathematical Intelligencer, 11(1989), 68-70.

Hogendijk, Craig. "Sharaf al-Dīn al-Ṭūsī on the Number of Positive Roots of Cubic Equations." Historia Mathematica 16(1989), 69-85.

Martinović, Ivica. "Boscovich's 'model of atom' from 1748." in M. Bossi & P. Tucci (eds.), Bicentennial Commemoration of R. G. Boscovich, Milan, September 15-18, 1987: Proceedings. Milano: Edizioni Unicopli, 1988, 203-214. [Bošković's theorem on the equilibrium state of the three points system.]

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The Canadian Mathematics Education Study Group
Groupe Canadien d'étude en Didactique des Mathématiques

The annual meeting will take place from May 25 to May 29 at Simon Fraser University, Burnaby, B.C. (Attention: this meeting is not at Victoria!). For details contact:

Lars Janson (Secretary-Treasurer)
Faculty of Education
University of Manitoba
Winnipeg, Manitoba R3T 2N2

or the local representative

Tasoula Bergren
Dept. of Mathematics and Statistics
Simon Fraser University
Burnaby, BC. V5A 1S6

The invited speakers are:

Ubiratan D'Ambrosio (Brasil): "Values in Mathematics Education".

Anna Sierpinska (Poland): "On Understanding Mathematics"

There will a panel discussion on: "The future of Mathematical Curricula in Light of Technological Advances"

There will be working groups in the following areas:

A. Reading and Writing in the Mathematics Classroom (leaders: Linda Brandau, Arthur Powell).

B. The NCTM Standards and the Canadian Reality (leaders: Tom Kieren, George Gadanidis).

C. Explanatory Models of Children's Mathematics (leaders: Bruce Harrison, Nicolas Herscovics).

D. Chaos and Fractal Geometry for High School Students (leaders: Ron Lewis, Brian Kaye).

In addition there will be Topic Groups on the following subjects:

A. The "Mathematics for Meaning Project" (S. Sigurdson).
B. First adventures and misadventures in the use of MAPLE (J. Hillel).
C. The Turtle Revisited (H. Gerber).
D. The Benchmark Program: Evaluation of Student Achievement incorporating the NCTM Standards (J. Clarke).
E. Fractal Geometry (R. Lewis, B. Kaye).

See the following table for the times of all these events.

CANADIAN MATHEMATICS EDUCATION STUDY GROUP
14th ANNUAL MEETING

May 25th to May 29th, 1990
Simon Fraser University, Burnaby B.C. V5A 1S6

SCHEDULE

FRIDAY May 25	SATURDAY May 26	SUNDAY May 27	MONDAY May 28	TUESDAY May 29
	Conference at SFU Harbour Centre Bus leaves 8:15			
	9:00-12:00 Working Groups A, B, C, D	8:30-10:45 Working Groups A, B, C, D .... 11:00-12:30 Lecture II MPX 8620	9:00-12:00 Working Groups A, B, C, D Halpern Centre	8:30-10:30 Panel Discussion Halpern Centre .... 10:45-12:15 Closing Plenary Halpern Centre
	13:15-14:00 Discussion of **Lecture I**	Bus leaves at 13:00 for trip to Whistler Mtn Resort	13:45-14:30 Discussion of **Lecture II** Halpern Centre	
14:00 - 16:00 Registration McTaggart Cowan Hall	14:15-15:15 Topic Groups **A & B**		14:45-15:45 Topic Groups **C & D** Halpern Centre	
16:30-17:30 Opening plenary and introduction to Working Groups Halpern Centre	15:30-16:30 **Disc of Book** 16:45-17:45 **AGM**		16:00-17:30 Ad Hoc Groups Halpern Centre Computer Lab MPX	
Dinner D.U.C.	**Dinner downtown**		**Dinner D.U.C.**	
19:00-20:30 **Lecture I** Halpern Centre	•		19:00-20:30 Topic Groups **E & F** **D.U.C.**	
No host bar at D.U.C	On your own	21:30 bus leaves for SFU	Wine/cheese at D.U.C.	

CANADIAN SOCIETY FOR HISTORY AND PHILOSOPHY OF MATHEMATICS
SOCIETE CANADIENNE D'HISTOIRE ET DE PHILOSOPHIE DES MATHEMATIQUES

Sixteenth Annual Meeting   Seizième Congres Annuel

<u>Thursday May 31/Jeudi 31 Mai</u>

9:00   Len Berggren, President, CSHPM/SCHPM   Welcome
       and Fran Abeles, Conference Organizer

   JOINT SPECIAL SESSION: HISTORY AND PEDAGOGY: 9:10-3:30

                  (Presider, Morning: Victor Katz)

9:10   Victor Katz, Coordinator of   Introduction of
       Special Session   guest speaker

9:15 Judy Grabiner, Guest Speaker
     Was Newton's Calculus a Dead End?
     Maclaurin's Place in British and Continental Mathematics

10:15   TEA & COFFEE

10:40 Israel Kleiner   .
      Themes in the Evolution of Number Systems

11:20 Charles Jones
      The Beginnings of the New Math Movement:
      The Ball State Program

11:50   LUNCH (COUNCIL MEETING)

             (Presider, Afternoon: Israel Keiner)

1:20 Sam Kutler
     Why Study Ancient Mathematics?

1:55 Erica Voolich
     A Multicultural and Historical Approach in the Elementary
     Classroom

2:30 Victor Katz
     Non-Western Mathematics in the University Classroom

3:00 V. Fred Rickey
     Old Calculus Problems Make for a Lively Course

3:30   TEA & COFFEE

             REGULAR SESSION: 3:55 - 5:15

3:55 Irving Anellis
     The Roots of Mathematics and Mathematics Education in Russia
     in the Age of Peter the Great

4:35 Erwin Kreyszig
     Plateau's Problem

REGULAR SESSION 8:30-5:25

(Presider, Morning: Craig Fraser)

8:30 James Tattersall   Nicholas Saunderson: The Blind Lucasian Professor

9:00 Ubiratan D'Ambrosio   The Life and Work of Joaquim Gomes de Sousa (1820-1863) A Brazilian Analyst

9:30 Craig Fraser   The Mathematical Origins of Lagrange's Theory of Planetary Perturbations

10:00 Elizabeth Smith   Scottish Contributions to the Introduction of Continental Analysis in Britain, 1780-1815

10:30   TEA & COFFEE

10:55 Sharon Kunoff   A Curious Counting/Summation Formula from the Ancient Hindus

11:25 Len Berggren   Greek and Islamic Elements in Arabic Mathematics

11:55   LUNCH AND ANNUAL MEETING/REUNION ANNUEL

(Presider, Afternoon: Fran Abeles)

1:30 Glen Van Brummelen   A Survey of Interpolation Methods from Harriet to Newton

2:00 M.A. Malik   Markoff's Theorem on the Derivative of Polynomials

2:30 Lilliane Beaulieu   An Instance of Bourbaki's Decision-Making Process
Modules in Linear Algebra (1941-1946)

3:00 Jacqueline Brunning   C.S. Peirce's Relative Product

3:30   TEA & COFFEE

3:55 Peter Griffiths   Archimedes Computation of π, A Clarification

4:25 Jonathan Seldin   From Exhaustion to Modern Limit Theory

4:55 A.K. Ray   History of Space Mathematics