BRITISH AND WESTERN EUROPEAN PREHISTORIC MEGALITHS: DIFFUSION OR INDEPENDENT INVENTION?

A SABBATICAL RESEARCH
REPORT FOR THE FALL SEMESTER 1983-84

Submitted by Kenneth C. Irvine
November 2, 1984

STATEMENT OF PURPOSE

A research report on the topic of the origins of Western European neolithic megalithic architecture. Evidence is drawn from visits to sites and museums in England, Wales, Ireland, Scotland, Denmark, Netherlands and France , and by university library research.

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INTRODUCTION

The use of large boulders in construction leads to a form of stone architecture called megalithic. Such structures are found world-wide, but their first and most famous presence is in the 50,000 megaliths found throughout the British Isles and Western Europe.

Megalithic structures may vary in size, shape and function but seem to offer three general types. Menhirs are structures of single upright stones. Groups of menhirs are in semicircles, circles, or straightlines stretching for miles if the stone circles are surrounded by circular ditches and banks they are referred to as henges. Dolmens are megalithic structures with a roof.

Most of the dolmens appear to be tombs and of three types: single chambered, gallery graves, or passage graves. A single chambered megalithic tomb has one small room. A gallery grave tomb is an elongated version of the single chamber dolmen. The passage grave contains a long corridor entrance descending to the main chamber or tomb.

Two of the most spectular megalithic sites are Stonehenge and Avebury in England. Stonehenge contains an avenue of two parallel lines of bank and ditch seventy feet apart running straight for 1,800 feet. A large embankment and ditch 320 feet in diameter circles the site. Immediately inside there is a ring of 52 pits or aubrey holes. Two more rings of pits follow, referred to as Y and Z holes. At the center of the site are the great monoliths of sandstone or sarsen stones, 30 to 80 feet tall

weighing up to 28 tons. At the middle is a small circle of bluestones numbering 19 and no more than 8 feet in height.

Avebury consists of a 20 foot high grass-covered chalk bank and an inner ditch with four entrances. Just inside the ditch, a circle of massive irregular sarsen stones enclosing 28 acres and originally numbering 100. Inside this circle of Avebury are two small rings of standing stones. Leading south from the site, one and a half miles, is an avenue lined with pairs of broad and thin stones.

Before the rise of modern archeology in the nineteenth century, megaliths such as Stonehenge and Avebury have been subject to varied if not unusual interpretations. In the twelfth century, historian Geoffrey of Monmouth writing on Stonehenge, concluded that stones had been brought from Ireland by the wizard Merlin and became the burial site of King Arthurs' father. In 1725, both Avebury and Stonehenge were attributed by William Stukley, doctor and clergyman, to have been centers for the Druid religious cult. Today we know that these explanations, like many others, have proven to be false.

PROBLEM

The beginnings of the modern controversy over the explanation of the Europeon stone monuments began in 1849. Algernon Herbert in his work, Cyclops Christianus, coined the word megalith and applied the term to all prehistoric stone monuments world-wide. This gave birth to the idea that all these monuments were connected. Connections among these megaliths became known as a diffusionist explanation or viewpoint.

Diffusionism, the spread of material and ideas from culture to culture, usually postulated a geographic center or centers. The discovery of the Rosetta stone and the subsequent archeological activity in the Near East lead to the growing conviction that Egypt and/or Mesopotamia was such a center of diffusion. That is the ideas of building techniques and design leading to the European megaliths diffused from the Near East. The Ancient Egyptians and/or Sumerians were the innovators, the ancient Europeans imitators.

In 1903 Oskan Montelius published a systematic chronology of the spread of Egyptian and Mesopotamian tools and weapons across Europe. In 1911 Grafton Elliott Smith declared that the megaliths resulted from the wise men of predynastic Egypt and Sumeria. In 1925 the foremost European archeologist, V. Gordon Childe, wrote that the ancient civilizations were the innovators and the barbarians of Europe merely recipients borrowing from Montelius. Childe built a chronology demonstrating the spread of megaliths from the Near East to Europe: starting in 3000 B.C. and continuing through Spain in 2700 B.C. and the rest of Europe by 2000 B.C. Later, prominent archeologists placed their discoveries in the framework of time and explanation established by Montelius, Smith, and Childe.

The independent invention explanation was a minority view until the late 1950's. Glyn Daniel viewed the megaliths as a local invention untouched by events outside Europe. He saw these works as phenomena created by European Neolithic societies and should be understood in that context. He thinks that the context

has to do with powerful religious beliefs especially about the afterlife, the specifics of which we may never know. Audrey Burl describes the British monuments as totally different from and evolving independently of even the continental megaliths. Collin Renfrew, the foremost European archeologist of the last part of this century, argues that we have completely under evaluated the originality and the creativity of the inhabitants of prehistoric Europe.

To establish the validity of the independent invention explanation of European megaliths, two types of hypothesis are required. One type is of time or chronology. The other type must account for the origin and growth of megaliths within the context of prehistoric European society.

HYPOTHESES

Dating techniques in archeology are relative or chronometric. As chronometric techniques are the only ones to provide reasonably accurate quantitative dates, only this type will be considered. To demonstrate the independent evolution of European megaliths, the chronometric dates must be contemporaneous or earlier than the Near Eastern civilizations. In addition to chronology, independent invention of megaliths must be demonstrated by: a gradual evolution of size, form, and material; and explanation of their appearance and evolution.

The sudden appearance of large structures without any smaller precursors is often cited as evidence substantiating diffusion. A detailed archeological record of structures showing a gradual evolution to more complex tombs, circles, and henges, provides evidence for local independent invention.

In 1959, Leslie White specified increasing technological complexity, as measured by the ability to harness energy as the major contributing factor in social and cultural change. Sahlins and Service (1960) and especially Service (1962), students of White, have described the specific social changes that take place.

According to Service and Sahlins, small, personal, egalitarian societies of autonomous segments of camps and villages evolve into large inegalitarian societies of inegrated villages and towns. The smaller societies are bands and tribes, the larger societies chiefdoms.

Utilizing the concepts Service and Sahlins, Renfrew (1973), has specified the following changes in prehistoric Europe:

1) the appearance of an inegalitarian ranked society
2) the redistribution of economic goods by a chief
3) greater population density
4) increase in total population
5) increase in size of residence groups
6) greater economic productivity
7) more integrated society with greater number of status
8) centers which coordinate social, religious, and economic activities
9) frequent ceremonies and rituals
10) rise of priesthood
11) specialization in production
12) specialization of labor and crafts
13) organization of public labor for public works

As these changes took place, they should correlate with the

gradual change in complexity and number of megalithic tombs, circles, and henges.

EVIDENCE: CHRONOLOGY

The following are the most recent carbon 14 dates for two types of megaliths:

PASSAGE GRAVES

Gavrinis	France	3,000 B.C.
Barcloidy Galores	England	2,600 B.C.
La Houque Bie	Jersey	2,500 B.C.
Maes Howe	Orkney	2,200 B.C.
Carnac	France	2,000 B.C.
Bry Celli Dhu	England	1,800 B.C.

STONE CIRCLES AND HENGES

Arminghall Henge	England	3,200 B.C.
Stonehenge I (bank, ditch, aubrey holes)	England	2,800 B.C.
Avebury Stone Circles	England	2,600 B.C.
New Gange	England	2,500 B.C.
Stonehenge II (bluestones)	England	2,200 B.C.
Carnac	France	2,000 B.C.
Stonehenge III (Sarsens)	England	2,000 B.C.
Bry Celli Dhu Henge	England	1,800 B.C.

EVIDENCE: EVOLUTION OF MEGALITHS

At Star Carr site Yorkshire, England demonstrates a

segmentary band level society of hunter gathers. Around 7,600 B.C. about 25 people lived seasonally at lakeside campsites on log platforms felled and formed by stone and axe and hunting. Bones of wild deer, elk, ox, and pig are present. Such Mesolithic sites are common throughout Western Europe. At this time, no structure of earth, wood, or stone are present which could be seen as precursors to later megaliths.

By 4,200 B.C., villages of stone or wood houses are common with farmers growing wheat, barley and oats, and herding cows, sheep and pigs. The neolithic had arrived in Western Europe. Some of these wooden houses became mortuary houses. Later, these wooden houses had a stone root such as at Belas Knap Gloucestershire, England. By 4,000 B.C., these mortuary houses or boxes are joined and have become gallery graves with an entrance at one point. These are referred to as protomegalithic tombs. They were common in Cornwale, Wales, Ireland, and Western Scotland.

Around 3,500 B.C., covered walkways or passages to and between chambers were developed such as Kircudbright. They are primarily of stone. Thus, there is a four phase stage of tomb development: in Phase I, houses are made of wood and stone; in Phase II, specific houses become specialized or one chambered tombs; in Phase III, these houses are joined and become gallery graves; in Phase IV, covered walkways to and between chambers are added and these become passage graves. These developments occurred over approximately 700 to 1,000 years or 4,200 B.C. to 3,500 B.C.

Appearing shortly after 4,000 B.C. are haphazard pits such as Knockiveagh Down where rocks are piled over pottery and stone axes. Some of these pits may have been marked by a single large piece of wood or stone.

Later in 2,800 B.C., such as at Dorchester or Stonehenge I, these pits are established with banked or ditched circular enclosures, some with wooden roofs. By 2,500 B.C., they are found all over Britain. At such time, they become associated with stone circles inside the enclosure. By 2,200 B.C., many of these (Stonehenge, Avebury, Carnac) become a complex of enclosures, pits, stone circles, roads, and passage graves.

EVIDENCE: EXPLANATION OF EVOLUTION

Energy may be harnessed through muscular work. Renfrew (1973), among others, has estimated the number of man hours using physical labor it would have taken to build the various megalithic sites.

The earliest burial chambers appearing around 4,000 B.C. would have taken 5,000 to 10,000 man hours. The ditches and banks of dirt enclosures beginning around 3,000 B.C. took approximately 100,000 man hours. Major megalithic henge monuments such as Avebury (2,600 B.C.) involved up to 1.5 million man hours. The first and second stages of Stonehenge (2,800 B.C. - 2,200 B.C.) used at least 10 million man hours. And finally, transporting and erecting the Sarsen stones during Stage III at Stonehenge (2,200 B.C.) involved 30 million hours of physical labor.

EVIDENCE: THE APPEARANCE OF COMPLEX SOCIETY

By 3,000 B.C., flint and amber and later gold, copper, and

tin are mined throughout the British Isles and Western Europe. Craftsmen at nearby sites process these raw materials into finely made axes, jewelry, and bronze weapons. Axes, necklaces, and duggers among other things are traded far and wide. Craftsmen then learn to fit different materials together and transfer decorative designs from one material to another.

At Carnac, Avebury, and Stonehenge large concentrations of finished quality goods have been found. Networks of roads, some lined with timber, converge on these three places.

The earliest burials in single chamber or small gallery graves are almost devoid of grave goods. By 2,000 B.C. many burials in passage graves have extensive numbers of the timely grafted stones, jewelry, and weapons.

Also by 2,000 B.C., the Sarasen circles, involving millions of labor hours, at Carnac, Avebury, and Stonehenge are completed. Hawkins (1965), an astronomer, has demonstrated the many of these megalithic stones are astronomically aligned. The appearance of summer and winter are marked by rising or setting of the sun over certain stones. Whether the stones also mark new moons, eclipses, and stellar, phenomena is subject to considerable debate (see Burl, 1976).

Intense trade, finely crafted goods, elitist burials, and ritual centers; the elements of a complex society appear to be present.

CONCLUSIONS: CHRONOLOGY

The diffusion theory as best delineated by V. Gordon Childe had megalithic architecture arriving in Western Europe no earlier

than 2,000 B.C. Carbon 14 corrected dates demonstrates that passage graves and elaborate stone circles are present at least by 3,000 B.C. These corrected dates are contemporaneous with the beginnings of Mesopotania, and earlier than Egypt and Greece. Chronological evidence supports an independent invention hypothesis.

CONCLUSIONS: EXPLANATION OF EVOLUTION

To change society, people working through technology and labor need to harness increasing amounts of energy. The increasing amounts of energy harnessed by Western European Neolithic peoples is demonstrated by the increasing size and complexity of their megalithic monuments beginning about 4,000 B.C. over a 2,000 year period they built monuments which at first required 5,000 hours eventually culminating in Stonehenges' sarsen circle requiring 30 million hours.

CONCLUSIONS: THE APPEARANCE OF CHIEFDOMS

The increasing number of work hours to build they ever increasingly complex monuments provides indirect evidence for the appearance of chiefdoms. There must have been large numbers of people working together. At least, during the weeks and months of work, some central organized control, perhaps embodied in one person, would have been present. To feed the work parties quantities of food would have to be supplied and redistributed.

The increasing size and complexity of the monuments and concomitant work parties implies the appearance of large populations. The ability to release large numbers from farming and herding for public work parties and to feed them suggests greater economic productivity.

The movement of raw materials and finished products and the networks of roads indicates considerable trade. The quality of the trade goods implies highly specialized crafts people. The quantities of such goods at places like Avebury, Stonehenge, and Carnac imply that they were trade or market centers.

Burials with no goods or ordinary household goods are common throughout the neolithic. But by 3,000 B.C., a few burials are found which start to displaying changing statuses. By 2,000 B.C., with some burials containing gold, bronze, amber, and fine crafted trade goods, the presence of significant status differences and inequality is apparent.

The building of megalithic tombs suggests considerable concern with the dead and the afterlife. The henges and stone circles have considerable emphasis on ritual. It appears that people came to these centers to conduct burial rituals, to commemorate religious events tied to the astromical calendar, and to engage in intensive trading. Certainly, a growing and powerful priesthood must of been in charge of these events.

By 2,000 B.C., in Western Europe, small segmentary societies had give away to inegalitarian chiefdoms. Centralized authority, specialization of labor, inequality of statuses, large public labor pools, extensive trade, and elaborate religious rituals presided over by priests must have been common.

GENERAL CONCLUSION

Gradually and slowly over a 2,000 year period, Western Europeans evolved local indigenous complex societies built on trade, religious ritual, and central authority culminating in such

centers as Stonehenge. No reference to diffusion theories and the events in the Near East are required to account for these changes.

VALUE OF SABBATICAL

As a teacher of Sociology and Anthropology, I teach courses on the scientific study of human social behavior. This sabbatical allowed me to practice science in the areas in which I am involved in teaching and to observe, in person, archeological sites and museum collections with which I am only familar with from published reports. The material gathered I have already used during the spring semester 1984 in class on the following topics: the scientific method; the physical and social dimensions of burial practices; the change from egalitarian to inegalitarian society; the political impact of monumental architecture; independent invention vs. diffusion theories of social change; and the origins of the American social class system. During the winter of 1984-85, I will present a staff development program on my sabbatical research.

APPENDIX

REFERENCES CONSULTED:

General

Fagan, Brian, People of the Earth. Little Brown, Boston, 1983

Renfrew, Colin, The Explanation of Culture Change. Duckworth, London, 1973

Sahlins, Marshall and Service Elman, Evolution and Culture. University of Michigan, Ann Arbor, 1960

Service Elman, Primitive Social Organization. Random House, New York, 1962

White, Leslie A., The Evolution of Culture. McGraw-Hill, New York, 1959

Europeon Prehistory

Childe, V. Gordon, The Dawn of Europeon Civilization. Rootledge and Kagan Paul, London, 1925

Renfrew, Colin, "Carbon 14 and the Prehistory of Europe", Scientific American, Oct. 1971
The Emergence of Civilization. Methven, London, 1972
Before Civilization. Knopf, New York, 1973

British Prehistory

Forde-Johnston, J., Prehistoric Britain and Ireland. W. W. Norton & Co., New York, 1976

Laing Lloyd and Jennifer, The Origins of Britain. Charles Scribner's sons, New York, 1980

Megaliths

Burl, Aubrey, Stone Circles of the British Isles. Yale, New Haven, 1976

Prehistoric Stone Circles. C.I. Thomas and Sons, Havenford West, 1979

Rites of the Gods. J.M. Dent and Son, London, 1981

Piper, Edward, Rings of Stone. Ticknor and Fields, New Haven, 1979

Daniel, Glyn The Megalithic Buildeus of Western Europe. Penguin Books, Harmondsworth, 1963

"Megalithic Monuments", Scientific American, July, 1980

Mitchell, John, Megalithomania. Cornell University Press, Ithaca, 1982

Wernick, Robert, The Monument Builders. Time-Life, New York, 1973

Avebury Megalith

Burl, Aubrey, Prehistoric Avebury. Yale University Press, New Haven, 1979

Vatcher, Faith, The Avebury Monuments. The Department of the Environment, London, 1976

Stonehenge Megalith

Hawkes, Jacquetta, "Stonehenge", Scientific American, June, 1953

Hawkins, Gerald, Stonehenge Decoded. Souvenir Press, New York, 1965

Newall, R.S., Stonehenge. The Department of the Environment, 1959

Sabbatical Leave Proposal 1983 - 1984
Kenneth C. Irvine

Research Topic "Late Neolithic Megalithic Monuments and Tombs: The Beginnings of Social Inequality in Prehistoric Western Europe"

Preface

During the summer of 1976 I was a National Endowment for the Humanities Fellow in Archaeology at the University of California, Los Angeles, where I studied social inequality as demonstrated by modern burial practices. My research focused on the monuments and their inscriptions found in the Oakpark Cemetery, Claremont. This sabbatical leave proposal continues my interest in social inequality, monuments, and burial practices but switches the focus of attention from historic cemeteries to prehistoric cemeteries.

Controversy and Theory: Diffusion vs Independent Invention

Traditional European Prehistorians such as V. Gordon Childe have argued that the origins of European society diffused from the Middle East. Colin Renfrew has recently demonstrated with the recalibration of carbon 14 dates that European sites are contemporaneous with or earlier than Middle Eastern sites. He concludes that diffusion is not possible and that early European society evolved independently of the Middle East. Refrew speculates that the incentive to build megalithic monuments, passage tombs, and other aspects of Early European Society grew out of an increasing social inequality. An emerging elite was able to motivate and control the labor to build these monuments and tombs. This elite then administered the economic and religious activities that took place at these monuments and tombs.

Hypothesis

Emerging local social elites were responsible for the origins and development of megalithic monuments and tombs in Western Europe.

Testing the Hypothesis

It is critical for the confirmation of this hypothesis to demonstrate that sharp divisions in social inequality and stratification existed prior to building of the largest and most extensive monuments and tombs. Social inequality and stratification will be inferred in the earliest sites if distinctive burial practices separating elite

members from nonelites are present. Data will be collected by observations of archaeological sites and excavated materials on display at museums and in conjunction with the reading of the cited references in this proposal.

Archaeological Sites

England

Avebury District 3000 - 1800 BC
Sacred stone circles, causewayed camp, graves, mound
Smith, I. F., Windmill Hill and Avebury Excavations by Alexander Keiller 1925 - 39, 1965.

Stonehenge District 3000 - 1200 BC
Sacred circle, barrow cemeteries and earthworks
Atkinson, R. J. C., Stonehenge 1956.

Bryn Yr Hen Bobl 2500 - 2000 BC
Settlement, Platform, and Passage grave
Powell, T. G. E., Megalithic Enquiries in the West of Britain, 1969.

Bar Clo Diad Y Gawres 2500 - 2000 BC
Passage grave
Powell, T. G. E. and Daniel, G. E., Bar Clo Diad Y Gawres: The Excavations Of A Megalithic Chamber In Anglesey, Liverpool, 1956.

Bryn Celli Bhu 1800 BC
Henge and Passage Grave
Hemp, W. J. "The Chambered Cairn of Bryn Celli Dhu," Archaeologica (30) 1930.

Scotland

Maes Howe 2200 - 1800 BC
Passage grave
Childe, V. Gordon, "Excavations at Maes Howe," PSAS (82) 1947 -48

Skara Brae 1800 BC
Settlement
Childe, V. Gordon, Skara Brae, 1931.

Cairnpapple 2000 - 1500 BC
Henge Monument and stone burials
Piggott, Stuart, "The Excavations at Cairnpapple Hill, West Lothian," PSAS (82), 1947 - 48.

Mousa 300 BC
Citadel or broch
Cruden, Stewart The Brochs of Mousa and Clickhimin, Shetland, 1951.

Denmark
Jordoj 3500 - 1500 BC
Megalithic graves
Glop, P. V. Danish Prehistoric Monuments 1971.

The Netherlands
Toterfout - Halve Mijl 1600 - 1100 BC
Barrow cemetery
Glasbergen, W., "Barrow Excavations," Palaeohistoria (3), 1954.

France
La Houge Bie 2500 BC
Hawkes, Jaquetta, The Archaeology of the Channel Islands 1938.

Garv'inis 3000 - 2500 BC
Passage grave
Giott, P. Brittany, 1960.

Carnac 3800 - 2800 BC
Stone Alignments, Passage graves, and megalithic tombs
Daniel, G. E., Prehistoric Chambered Tombs of France 1971.

Museums
England
British Museum of Mankind in London
British Museum of Natural History in London
Museum of Archaeology and Anthropology in Cambridge
Ashmolean Museum in Oxford

Scotland
National Museum of Antiquities of Scotland in Edinburgh
Royal Scottish Museum in Edinburgh

Denmark
Forhistorisk Museum in Hojberg
National Museum in Copenhagen

The Netherlands
State Museum in Amsterdam
National Museum of Antiquities in Raamsteeg

France
Musee de l' Homme in Paris
Musee des Antiquities Nationales in Paris

University Library
The references cited will be read to further support data obtained from sites and museums. The library facility at the University of Coloradeo, Boulder will be utilized. This is a major university library with which I gained extensive familiarity as a Summer National Science Foundation Fellow in Anthropology.

Anticipated Value of Sabbatical

Presently I teach Introductory Sociology, Introductory Cultural Anthropology and Introductory Physical Anthropology. These courses emphasize the scientific study of the origin and development of human social behavior.

This sabbatical proposal will allow me to practice the art of science in areas which I am involved in teaching and to observe first hand archaeological sites and museum collections from which I am only familiar with from published reports. The notes written, pamphlets acquired, and photographic slides taken will be used to create the following specific instructional modules;

1. The scientific method: a case study from Western European Prehistory. (Cultural Anthropology)

2. The analysis of human bones from burials including age, sex, family relationships, disease, and diet. (Physical Anthropology)

3. The social dimensions of cemeteries. (Sociology)

4. The change from egalitarian to inegalitarian societies. (Cultural Anthropology)

5. Monumental Architecture as a form of political ideology. (Cultural Anthropology)

6. Theories of social change: independent invention vs diffusion. (Sociology)

7. The European origins of American inequality and social stratification. (Sociology).

These instructional materials and my formal research report will be shared with my departmental colleagues. In addition an illustrated slide lecture on "Stones and bones, what we can learn from the past" will be developed to present to a wider audience.

Although this reasearch proposal has a prehistoric focus on the issue of social equality and inequality is, of course, a very current, relevant social issue. In particular it is important for those of us who practice our craft of teaching at an open access institution to have carefully well thought ideas on social equality and inequality and their implications for society.

MT. SAN ANTONIO COLLEGE
Salary and Leaves Committee

MT. SAN ANTONIO COLLEGE
1982 NOV 23 PM 12:41
PERSONNEL OFFICE

APPLICATION FOR SABBATICAL LEAVE

Name of Applicant IRVINE (Last) KENNETH (First) CARY (Middle)

Address 525 Citadel, Claremont, California, 91711 (Street, City, Zip)

Employed at Mt. San Antonio College beginning September (Month) 1961 (Year)

Dates of last sabbatical leave:

From September (Month) 1971 (Year) To June (Month) 1972 (Year)

Department Sociology Division Social Sciences

Length of sabbatical leave requested:

One semester XXX

Fall XXX Spring _____

Two semesters _____

Administrative _____

Purpose of sabbatical leave:

Study _____ Independent Study and Research _____

Travel _____ Combination (specify) XXXX

*Research and Travel

Effective dates for proposed sabbatical leave:

From September 1983 To January 1984

and (if needed)

From _____ To _____

Attach a comprehensive, written statement of the proposed sabbatical activity(ies) including a description of the nature of the activity(ies), a timeline of the activity(ies), an itinerary, if applicable, the proposed research design and method(s) of investigation, if applicable.

Attach a statement of the anticipated value and benefit of the proposed sabbatical activity(ies) to the applicant, his/her department or service area, and the College.

Any change or modification of the proposed sabbatical activity(ies) as evaluated and approved by the Salary and Leaves Committee must be submitted to the Committee for reconsideration.

Kenneth C. Irvine
Signature of Applicant

11/23/82
Date

Applicant's Name KENNETH C. IRVINE

The acknowledgment signatures reflect awareness of the sabbatical plan for the purpose of personnel replacement. Comments requested allow for recommendations pertaining to the value of the sabbatical leave plan to the College. Applicants must obtain the signatures of acknowledgment prior to submitting application to the Salary and Leaves Committee.

ACKNOWLEDGMENT BY THE DEPARTMENT/DIVISION

Signature of Department Chairperson Kenneth Irvine Date 11/23/82

Comments:

Signature of Division Chairperson Roberta Amich Date 11/23/82

Comments: an excellent scholarly research sabbatical.

ACKNOWLEDGMENT BY THE OFFICE OF INSTRUCTION

Signature of Vice President/Asst. Superintendent Instructional & Student Services Joseph M. Jagoroski Date 11-23-82

Comments:

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FINAL ACTION BY THE SALARY AND LEAVES COMMITTEE:

✓ Recommend approval to the Board of Trustees

_____ Not recommend approval to the Board of Trustees

Karen K. Collins 12-3-82
Signature - Chairperson, Salary and Leaves Committee Date

John O Rankin 11/30/83
Signature - Authorized Agent for the Board Date

myw
10/21/82

MUSEUMS VISITED

United Kingdom

- Avebury
  - Museum at Avebury
- Bath
  - Baths Museum
- Cambridge
  - Fitzwilliam Museum
  - Museum of Archaeology and Anthropology
- Chedworth
  - National Trust Museum
- Dublin
  - National Museum of Ireland
- Durham
  - Museum of Archaeology
- Edinburgh
  - National Museum of Antiquities of Scotland
  - Royal Scottish Museum
- London
  - British Library and Museum
  - British Museum of Mankind
  - British Museum of Natural History
  - Geological Museum
  - Museum of London
- Oxford
  - Ashmolean Museum
  - Museum of the History of Science
  - Pitt Rivers Museum of Ethnology
  - University Museum
- Salisbury
  - Salisbury and South Wiltshire Museum
- York
  - Yorkshire Museum

Denmark

- Copenhagen
  - Danish National Museum

The Netherlands

- Amsterdam
  - Archaeolgical Museum of the University
  - State Museum

France

- Paris
  - Museum of Man
  - Museum of National Antiquities
  - Museum of Natural History

SABBATICAL SCHEDULE FALL SEMESTER 1983-84

MONTH	WEEK
September	1&2 University library research:Claremont
	3 Travel and visits to museums and sites:London,England
	4 England:Avebury,Salisbury,and Stonehenge
October	5 England:Durham and Oxford
	6 Wales and Dublin,Ireland
	7 Scotland:Edinburgh
	8 England:Bath,Cambridge,and York
November	9 Denmark:Copenhagen
	10 Netherlands:Amsterdam and The Hague
	11 France:Normandy and Paris
	12 England:London
December	13&14 University library research:Claremont
January	15&16 University library research:Colorado
	17&18 University library research:Arizona

" STONES AND BONES "

"Stones and bones" is a slide show and narration that summarizes my sabbatical leave research in a form suitable for a general audience.The slides are of neolithic megalithic henges and tombs of England and Wales.The narration stresses the diffusion versus independent invention controversy regarding the origin of these stone structures.An initial version of this lecture was given in the Staff Center to an audience of 30 faculty,managers,and staff November 28,1984.