SEAA 2004 KOREA

Third International Congress

Society for East Asian Archaeology

June 16~19, 2004

Chungnam National University

Daejeon, Korea

General Information

SEAA 2004 Office is at Paekche Research Institute, located on the first floor of the northern wing of College of Natural Sciences. Come here if you have questions about the program, equipment, late registration, post-congress tour, etc. If you have urgent needs, please call (042) 821-6301 (conference staff), (042) 821-6384 or (011) 285-6567 (Prof. Pak Yangjin).

Registration will be open in the first floor lobby of the Munwon Hall all day Wednesday and Thursday. After that, registration materials can be picked up at the SEAA 2004 office at Paekche Research Institute.

Post-Congress Tour will be offered from June 20 to 23. All participants must sign up and pay beforehand. Please check at the registration desk.

Internet Access is available to congress participants at the following locations. It is free of charge and on a first-come-first-service basis, but please be considerate of others needing to use the machines if none are available.

College of Humanities # 239 (Information Search Room)
Baekma Cultural Education Center #309
Central Library Multi Media Room (First Floor)
Lobby of University Museum (2 terminals)
Second Floor of Student Union #1 (5 terminals)

Copying (xeroxing) is available with payment at the copy room located near the staircase of the western wing of College of Humanities.

Shuttle Bus service will be provided between Spapia Hotel and College of Humanities during the congress. Morning shuttle will leave the hotel at 9:00 am. Evening shuttle will leave the College at 5:30 pm.

ACKNOWLEDGEMENT

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Korean Prehistoric Archaeological Society 한국선사고고학회
Zininzin 진인진

We express our deep gratitude to:

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Department of Archaeology, CNU
Chungnam National University Museum

We also express our heartfelt thanks to numerous volunteers whose efforts have made this meeting possible; in particular, we say special thanks to the following individuals:

Ms Ahn, Pyoungjoon
Ms Han, Jinsook
Ms Park, Hyerim

SEAA 2004 Korea At a Glance

Wednesday, June 16	2:00 pm	3:00 pm	4:00 pm
Munwon Hall	Opening Session: *Korean Archaeology at the Crossroads*		

6:30 Opening Reception at Spapia Hotel

Thursday, June 17	9:30 am	10:30 am	11:30 am	2:00 pm	3:00 pm	4:00 pm
Baekma Hall	1A: *Aspects of Social Archaeology from Kyushu, Japan*			2A: *Korean Prehistoric and Early Historical Archaeology*		
Museum Auditorium	1B: *Xiongnu and Mongolian Archaeology*			2B: *Archaeology in Russian Far East*		
Munwon Hall	1C: *Issues in Environmental Archaeology in China*			2C: *Various Issues in Chinese Archaeology*		

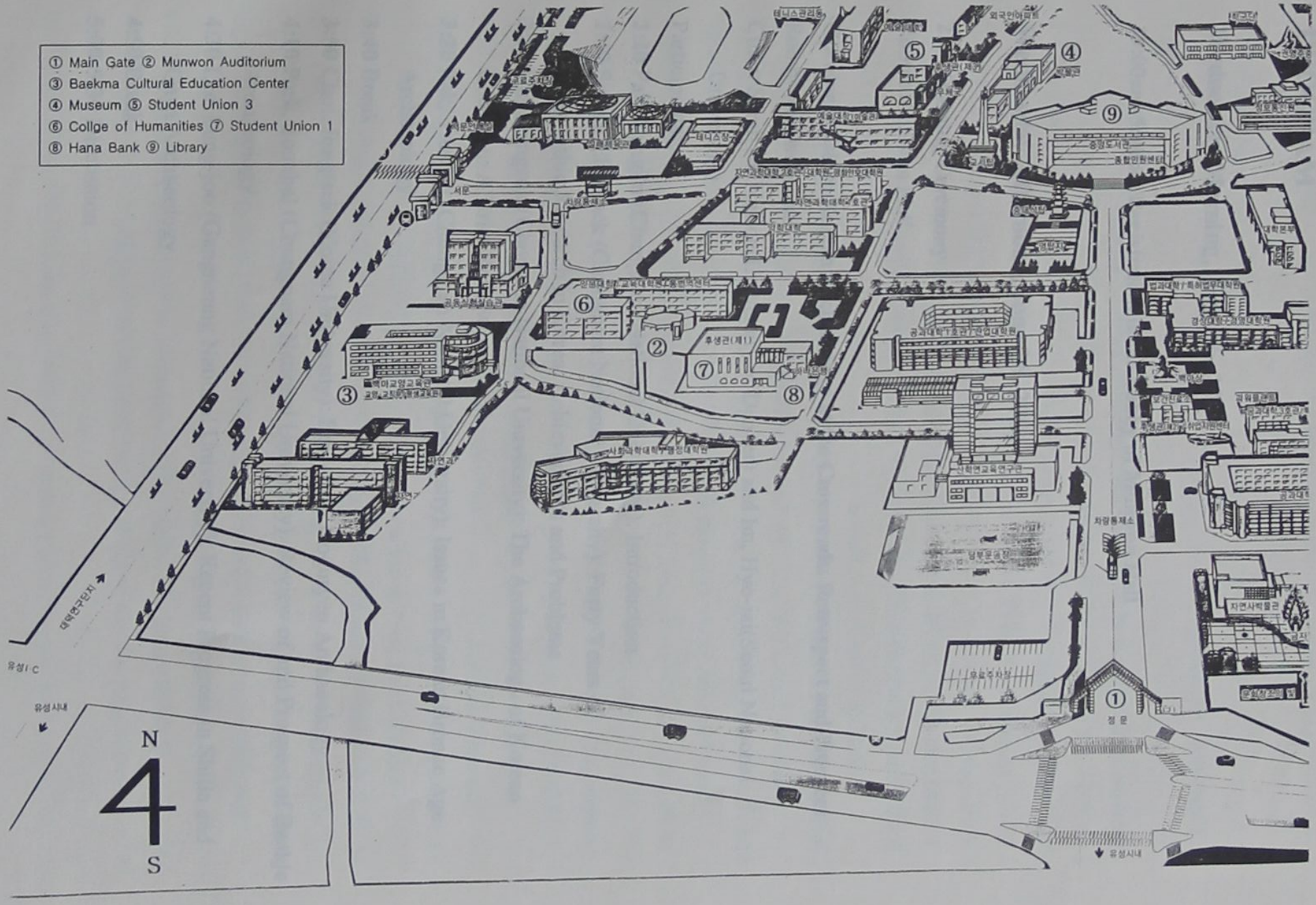
8:00 pm Society Business Meeting at Spapia Hotel (Moran Room)

Friday, June 18	9:30 am	10:30 am	11:30 am	2:00 pm	3:00 pm	4:00 pm
Baekma Hall	3A: *Current Researches in Shang Archaeology*			4A: *Gender Archaeology in E. A.*		5A: *Japanese Archaeolo*
Museum Auditorium	3B: *Tsushima Archaeology*		4B: *Yayoi in the E*	5B: *Palaeolithic Archaeology in East Asia*		

6:00 Farewell Reception at a place to be announced

Saturday, June 19	9:30 am	10:30 am	11:30 am	2:00 pm	3:00 pm	4:00 pm
Baekma Hall	6A: *Interdisciplinary approaches in Japanese Archaeology*					
Museum Auditorium	6B: *East Asian Archaeology and Related Issues*					
Munwon Hall	6C: *Interdisciplinary approaches to Chinese Archaeology*			Closing Session: *Future of East Asian Archaeology*		

Post-Congress Tour: Sunday, June 20 - Wednesday, June 23 (Gongju, Buyeo, Busan, Gimhae, Gyeongju, Seoul)


① Main Gate ② Munwon Auditorium
③ Baekma Cultural Education Center
④ Museum ⑤ Student Union 3
⑥ Collge of Humanities ⑦ Student Union 1
⑧ Hana Bank ⑨ Library
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PROGRAM

Wednesday Morning, June 16, 2004

10:00am-5:00pm Registration in the Lobby of Munwon Hall

Wednesday Afternoon, June 16, 2004

2:00 Opening Ceremony

Room: Munwon Hall

Opening Session: Korean Archaeology at the Crossroads: Retrospect and Prospect

Room: Munwon Hall

Chair: Sarah M. Nelson(University of Denver) and Im, Hyo-jai(Seoul National University)

Participants:

2:20 Pak, Yangjin (Chungnam National University): Introduction

2:40 Seong, Chuntaek (Chungnam National University): Forty Years of Palaeolithic Research in Korea: Achievements and Problems

3:00 Kim, Jangsuk (Chonnam National University): The Archaeology of Korean Chulmun: A Brief Review

3:20 Pak, Yangjin (Chungnam National University): Issues in Korean Bronze Age Archaeology

3:40 Break

3:50 Choi, Jongtaek (Korea University): Review of Goguryeo Archaeology

4:10 Park, Soonbal (Chungnam National University): Review of and Prospect of Baekje Archaeology

4:30 Lee, Sung-joo (Gangneung National University): Recent Progress in Shilla and Gaya Archaeology

4:50 Break

5:00-5:30 Discussion

6:30 Welcoming Reception at Spapia Hotel

Thursday Morning, June 17, 2004

Session 1-A: Aspects of Social Archaeology from Kyushu, Japan

Room: Baekma Hall
Chair: Mizoguchi, Koji (Kyushu University)
Participants:

9:30 Mizoguchi, Koji (Kyushu University): Introduction

9:40 Itakura, Yudai (Kyushu University): Emergence and Transformation of Sedentism in the Jomon Period

9:55 Ishikawa, Takeshi (Kyushu University): Social Transformation from the Late to the Final Jomon period in the Kyushu region, Japan

10:10 Shigematsu, Tatsuji (Kyushu University): Dynamics of the Regional Society as Seen from the Study of Yayoi Pottery

10:25 Kanegae, Kenji (Kyushu University): Production and Distribution Mode of the Yayoi Pottery of Northern Kyushu

10:40 Break

10:55 Tajiri, Yoshinori (Kyushu University): The Context and Social Significance of the Small Bronze Mirrors Imitating the Chinese Originals Excavated from the Korean Peninsula

11:10 Mizoguchi, Koji (Kyushu University): Ritual and Social Stratification: the Case of Middle and Late Yayoi Period Northern Kyushu, Japan

11:25 Funahashi, Kyoko (Kyushu University): Ritual Tooth Ablation and Social Organization from the Final Jomon to the Yayoi in Northern Kyushu, Japan

11:40 Watanabe, Makoto (Kyushu University): Pottery and Social Strategy: the Introduction of a New Pottery Assemblage in the Yayoi-Kofun Transitional Period of San'in Region, Western Japan

11:55 Oda, Yuki (Kyushu University): The Adaptation of Cremation Practices in Ancient Japan: a Case Study in the Northern Kyushu Region

Session 1-B: Xiongnu and Mongolian Archaeology

Room: Museum Auditorium

Chair:

Participants:

9:30 Kang, In-Uk (Seoul National University): Historical Review on the Ordos Bronzes and Pre-Xiongnu Culture: Problems in the Northern Steppe Zone of China

9:45 Bryan Kristopher Miller (National Chengchi University): Xiongnu Mortuary Analysis

10:00 Francis Allard (Indiana University of Pennsylvania): The Khanuy Valley International Collaborative Project on Early Nomadic Pastoralism in Mongolia

10:15 Yun, Hyeung-won (National Museum of Korea): Hudgiin-Tolgoi Hunnu Tombs in Mongolia

10:30 Naran Bazarsad (Institute of Archaeology): Pathological Cases from the Bronzeand Early Iron Age in Mongolia

Session 1-C: Issues in Environmental Archaeology in China

Room: Munwon Hall

Chair: Rowan Flad (Harvard University) and Yuan, Jing (The Institute of Archaeology, CASS)

Participants:

9:30 Rowan Flad (Harvard University): Introduction

9:40 Qi, Wuyun (Institute of Archaeology, CASS): A Study of Environmental Archaeology on the Prehistoric Culture

9:55 Yuan, Jing (Institute of Archaeology, CASS): Shell Middens in the Jiaodong Peninsula Studying Environmental Archaeology

10:10 Jiao, Tianlong (Bishop Museum): Maritime Adaptation and Agriculture in the Neolithic of Coastal Southeast China: Implications for Proto-Austronesian Expansions

10:25 Jia, Wei Ming (University of Sydney): The study of Environmental Reconstruction and Its Application

10:40 Break

10:55 Xia, Zhengkai (Peking University): Preliminary Study on the Prehistoric

Disasters at Lajia Site, Qinghai, China

11:10 Mo, Duowen (Peking University): Effects of Holocene Environmental Changes on the Development of Archaeological Cultures in Different Regions of China

11:25 Arlene Rosen (University College London): Holocene Environmental Change and Agricultural Opportunism in the Development of Early Complex Society

11:40 Rowan Flad (Harvard University): Zooarchaeology in the Prehistoric Three Gorges: A View from Zhongba

11:55 Nakawo, Masayoshi (Research Institute for Humanity and Nature): Water in an Oasis-region in Western China in Yuan Dynasty and the Last Decades

Thursday Afternoon, June 17, 2004

Session 2-A: Korean Prehistoric and Early Historical Archaeology

Room: Baekma Hall

Chair:

Participants:

2:00 Song, Eunsook (Chonnam National University): Subsistence Patterns of Korean Neolithic: Osanri and Jigyeongri Adaptations on East Coast of Korea

2:15 Shin, Sook-Chung (Wonju Museum of Yonsei University): Analyses of Firing Conditions of Pottery Vessels from Neolithic to Joseon Period

2:30 Im, Hyo-jai (Seoul National University): Cultural Interaction Between Korea and Northeast China During Neolithic Age

2:45 Kim, Gwongu (Keimyung University): A Consideration of Residential Practices During the Korean Bronze Age and Its Family System

3:00 Break

3:15 Kang, Bong Won (Kyongju University): A Social Reconstruction of the Korean Bronze Age: Based on the Dolmens Discovered in the Southeastern Korea

3:30 Lee, Hong-jong (Korea University): Cultural Contacts and Cultural Changes in the Bronze Age Korea

3:45 Lee, Sung-joo (Gangneung National University) & Martin Bale (University of Toronto): South-central Korea and the development of complex societies, circa 300 BC to AD 400

4:00 Lee, Sungjoon (Chungnam Nationa University): Ancient Economic Zone and the Establishment of Administrative Zones

4:15 Kang, Hyun Sook (Dongguk University): Mural Painting Tombs from Goguryeo and Chinese Gansu: A comparative study

4:30 Yim, Youngjin (Chonnam National University): Burials and Construction Context of the Janggo-shaped Tombs

4:45 Andrey Zagorulko (Russian Research Institute for cultural and Natural Heritage):Rethinking Sopohang: Evolution of Neolithic Site in North-East Korea

Sesson 2-B: Archaeology in Russian Far East

Room: Museum Auditorium

Chair:

Participants:

2:00 Kato, Hirofumi (Hokkaido University): Emergence of the Oldest Pottery and"Oshipovka Culture" in Russian Far East

2:15 Helena Sergusheva (Institute of History, Archaeology and Ethnography, RussianAcademy of Sciences, Far Eastern Branch): The Plant Cultivation Dynamics of the Early Agricultural Societies of Primorye Region.

2:30 Yuri Vostretsov (Institute of History, Archaeology and Ethnography, Russian Academy of Sciences, Far Eastern Branch): Environment Changes and Migrations: a Case Study

2:45 Evgenia Gelman (Institute of History, Archaeology and Ethnography of peoples ofthe Far East): Evolution of the Bohai Tail and Periodization of Buddhist Temples

3:00 Yuri Nikitin (Far Eastern State Technical University): Excavation of Bohai Tomb in Primorye in 2003

Session 2-C: Various Issues in Chinese Archaeology

Room: Munwon Hall

Chair:

Participants:

2:00 Chen, Pochan (University of California, Los Angeles): Rethinking of Leixingxue

2:15 Tokudome, Daisuke (Kyushu University): The Changes and Distribution Patterns of House Forms during the Prehistoric Period in China

2:30 Hung, Ling-yu (Washington University in St. Louis): Decoration Analysis and Social Units: a Case Study of Fish-motifs on Yangshao Pottery

2:45 Gwen P. Bennett (Washington University in St. Louis): Salt Production and Changjiang Region Lithics

3:00 Break

3:15 Chiou-Peng, TzeHuey (University of Illinois Urbana Champaign): Stone Ornaments from the Bronze Age Sites of Yunnan: New Lights on Cultural Interactions between Yunnan and Its Surrounding Regions

3:30 Luisa-Elena Mengoni (University of College London): Copying with Changes: Patterns of Social and Cultural Diversification in Pre-Imperial Sichuan (5th and 3rd Century B.C.)

3:45 Barry Rolett (University of Hawaii): Early Seafaring and Exchange in Southeast China: New Evidence for the Austronesian Homeland

4:00 Walburga Maria Wiesheu (National School of Anthropology and History, Mexico): Inner and Outer Walls in Urban Development in China

4:15 Robert D. Drennan & Christian E. Peterson (University of Pittsburgh): Comparative Settlement Pattern Research on Early Chiefdom Communities in Eastern Inner Mongolia, the Northern Andes, and Mesoamerica

Thursday Evening, June 17, 2004

Business Meeting of the Society for East Asian Archaeology

Room: Moran Hall(Fourth Floor), Spapia Hotel Session

Time: 8:00 pm

Friday Morning, June 18, 2004

Session 3-A: Current Researches in Shang Archaeology

Room: Baekma Hall

Chair:

Participants:

9:30 Minna Haapanen (University of California, Los Angeles): The Social Role of Eating in the Context of Shang Bronze Manufacturing

9:45 Song, Guoding (Institute of Archaeology of Henan Province): The Human Sacrifice of the Mid-Shang Dynasty

10:00 Zhang, Liangren (University of California, Los Angeles): The Mode of the Wucheng Community's Economic connection with the Shang Metropolitan Centers

10:15 Meng, Xianwu & Li, Guichang (Archaeology Team of Anyang City): The Houses with Courtyard (Siheyuan) at Yinxu

10:30 Break

10:45 Sun, Yan (Gettysburg College): Bronzes from Xin'gan: Local Response to the Cultural and Political Expansion of the Shang

11:00 Fang, Hui (Shandong University): Daxinzhuang Site and Shang Culture in Eastern China

11:15 Li, Min (University of Michigan): Becoming Shang: The Perspective from Animal Bones at Daxinzhuang

11:30 Xu, Jay (The Art Institute of Chicago): Southern Influence in the Northern Zone: Evidence from Bronze Vessels of the Anyang Period

Session 3-B: Tsushima Archaeology: Cross-cultural perspectives on Korea and Japan

Room: Museum Auditorium

Chair: Tawara, Kanji (Tsushima Museum of History and Folklore) & Seyock, Barbara (University of Munich)

Participants:

9:30 Tawara, Kanji (Tsushima Museum of History and Folklore): Tsushima in the Focus of Cross-cultural Relations

9:45 Shoda, Sinya (Chungnam National University): Yayoi Dating Across the Northeast Asia

10:00 Nagamoto, Tomoko (Otemae University): The Relation of the Korea Peninsula and the Japanese Islands in the proto-Three Kingdoms Period

10:15 Barbara Seyock (University of Munich): The Wei-chih Tung-i-chuan as a Source for the Perception of the Metal Age Cultures in the Korean Straits Region

10:30 Break

10:45 Nakamura, Daisuke (Osaka University): Relationship in Ritual of Funeral Between Japan and Korea

11:00 Furiya, Tetsuo(Kyushu University): A Study of the Distribution of Korean Ceramic: Based on the Analysis of Celadon Ware During the Medieval Period of Japan

Session 4-B: Yayoi in the East Asian Interaction Sphere: Problems presented by the AMS Radiocarbon Dates for the Yayoi Period in Japan

Room: Museum Auditorium

Chair: Fumiko Ikawa-Smith (McGill University)

Participants:

11:30 Fumiko Ikawa-Smith (McGill University): Yayoi in the East Asian Interaction Sphere: Introduction and Background

11:45 Fujio, Shinichiro & Sakamoto, Minoru (National Museum of Japanese History):AMS Radiocarbon Dating for the Beginning of the Yayoi Period in Japan

12:00 Takakura, Hiroaki (Seinan Gakuin University) & Mizoguch, Koji (KyushuUniversity): Some Problems with the Outcome of the A.M.S. Dating of the Yayoi Period by the National Museum of Japan

12:15 Discussion: Sarah M. Nelson (University of Denver), Gina L. Barnes (University of Durham)

Friday Afternoon, June 18, 2004

Session 4-A: Prospects of Gender Archaeology in East Asia

Room: Baekma Hall

Chair: Matsumoto, Naoko (Okayama University & Nakanishi, Yumiko

Participants:

2:00 Matsumoto, Naoko (Okayama University): Introduction

2:10 Sarah M. Nelson (University of Denver): Gendered Archaeology and the Question of Power in East Asia

2:25 Namba, Junko (Tenri University): Gender Archaeology of China

2:40 Matsumoto, Naoko (Okayama University): Why Gender Archaeology is not Popular in Japan

2:55 Iwasaki, Kumi (Okayama University): Anthropomorphic Clay Figurines in the Prehistoric Japanese Archipelago: Ideological and Gendered Perspective

3:10 Gina L. Barnes & Kaneko, Masumi (University of Durham): Roles of Women in Nihon Shoki

Session 5-A: New Perspectives in Japanese Archaeology

Room: Baekma Hall

Chair:

Participants:

3:45 Gina L. Barnes (University of Durham): The Japanese Islands from Fifteen to Half a Million Years Ago: Implications for Archaeology

4:00 Mitsumoto, Jun (Okayama University): New Direction in the Archaeology of Human Body in Japan and its Application to the Social Body in the Kofun Period

4:15 Mark Hudson (Hokkaido University): World System Incorporation and the Okhotsk Culture of Hokkaido

4:30 Mizoguchi, Koji (Kyushu University): Fragmentation and identity politics: Hyper-Capitalism and Archaeological Discursive Formation

Session 5-B: Palaeolithic Archaeology in East Asia

Room: Museum Auditorium

Chair:

Participants:

2:00 Takakura, Jun (Hokkaido University): The Middle to Upper Palaeolothic Transitional Process in East Asia: A Preliminary Approach

2:15 Choi, Mou-chang (Konkuk University): The Stone Artifacts from the Wondang-ri Site of the Sixth Excavation in 2003

2:30 Kato, Hirofumi (Hokkaido University): A Study of the Microblade Flaking

Technology in Northeast Asia

2:45 Break

3:00 Izuho, Masami (Sapporo Buried Cultural Property Center): A Chronology of Late Pleistocene Sites in Hokkaido, Japan

3:15 Choi, Bok-kyu (Kangwon National University): The Mesolithic Culture in Korea

Saturday Morning, June 19, 2004

Session 6-A: Subsistence, Mortuary Practice, and Interdisciplinary Approaches in Japanese Archaeology

Room: Baekma Hall

Chair:

Participants:

9:30 Dawn Kaufmann (Washington University in St. Louis): Paleoethnobotanical Investigation of Subsistence Practices in Northern Japan During Two Time Periods

9:45 Kim, Minkoo (University of California): Cultural Complexity of Jomon Hunter-Gatherers and Changes in Plant Exploitation at Sannai Maruyama

10:00 Miyamoto, Kazuo (Kyushu University): Emergence and Spread of Agriculture in East Asia

10:15 Tani, Naoko (Kyushu University): The Formation Process of the Custom of JarBurial in Northern Kyushu, Japan

10:30 Break

10:45 Kutsuna, Keizo (Okayama University): The Treatment of Children by Their Society in Ancient Western Japan

11:00 Walter Edwards (Tenri University): How Many Mirrors? A Simulation of the Discovery of Triangular-Rimmed Mirrors in Japan

11:15 Matsugi, Takehiko (Okayama University): A New Perspective on the Beginning of the Kofun Period Protohistoric Japan: From Group Oriented to Individual Oriented

11:30 Tsumura, Hiro'omi & Anezaki, Tomoko (National Museum of Japanese History): A New Approach to Palaeo-topography Using GIS for an Archaeological Perspective: a Case Study in the Kanto Plain, Japan

11:45 Walter Edwards & Okita, Masaaki (Tenri University): Reconstruction of Japanese Kofun (Mounded Tombs) Using Radar and Resistivity Prospection

12:00 Wendy Frederick (San Francisco State University): Ainu Archaeology and Ethnogenesis

Session 6-B: East Asian Archaeology and Related Issues

Room: Museum Auditorium

Chair:

Participants:

9:30 Christine Finn & Robin Coningham (University of Bradford): Ancient Belief, Contemporary Ritual: Modern Use of Buddhist Artifacts

9:45 Yang, Tanya (University of Arizona): The Stupa-Pagoda Tradition in East Asia

10:00 Mahammed A. Bekhechi (The World Bank): The World Bank and the Protection of Cultural Heritage. Recent Policy Development and Practice

10:15 Siva Rama Kirshna Pisipaty (Deemed To Be University, India): Environmental Constraints and Cultural Adoptions During the Third Millennium BC

10:30 Om Prakash Srivastav (Aligarh Muslim University): Terracotta Beads in Ancient India: An Archaeological Approach

10:45 Vinod Kumar Singh (Aligarh Muslim University): Pre-modern Irrigation Technology in Bundelkhand: Based on the Survey of Waterworks

Session 6-C: Interdisciplinary Approaches to Chinese Neolithic and Bronze Age Archaeology

Room: Munwon Hall

Chair: Liu, Li (La Trobe University) & Chen, Xingcan

Participants:

9:30 Liu, Li (La Trobe University): Introduction

9:40 Lu, Tracey Lie-Dan (Chinese University of Hong Kong): Intra-Disciplinary or Multi- disciplinary? Some Thoughts on Current Archaeological Research Approaches

9:55 Lee, Gyoung-Ah & Gary W. Crawford (University of Toronto at Mississauga): Changes in Plant Use in the Yi-Luo Basin

10:10 Liu, Li (La Trobe University): Wild and domestic water buffaloes in China: Zooarchaeological Investigations

10:25 Yang, Dongya (Simon Fraser University) & Liu, Li (La Trobe University): Wild and Domestic Water Buffaloes in Ancient China: Ancient DNA Analysis

10:40 Break

10:55 Chen, Xingcan (Institute of Archaeology, CASS): Ethnoarchaeology on Stone and Lime Production - a Case from Huizui

11:10 Elizabeth Childs-Johnson (American Council of Learned Societies 2003-2004): Early Shang China: Metropolitan Ding Vessels and the Question

11:25 Jin, Zhengyao (Research Institution of World Religions, CASS): A Reassertion that the High-Radiogenic-Lead in Shang Bronzes Originated in South-western China

11:40 Li, Yung-ti (Institute of History and Philology, Academia Sinica): Anyang Bronze Casting Technology: a Study of Section-mold Technology and Compositional Analysis of Molds

11:55 Lothar Von Falkenhausen (University of California, Los Angeles): The Burial Population of the Qucun Cemetery

Saturday Afternoon, June 19, 2004

Closing Session(Round-table Discussion): The Future of East Asian Archaeology

Room: Munwon Hall

Chair: To be announced

Discussants: To be announced

Time: 2:00 - 4:00

Korean Archaeology at the Crossroads: Retrospect and Prospect

Pak, Yangjin
(Chungnam National University)

This is an introduction to the opening session entitled "Korean Archaeology at the Crossroads: Retrospect and Prospect." It will first review major accomplishments of Korean prehistoric and historical archaeology in the past sixty years or so, and discuss in detail most recent archaeological developments in the past decade and current trends in Korean archaeology. It will also discuss major theoretical and methodological issues in the comtemporary Korean archaeology. Then this paper will address a few challenges Korean archaeology will have to face in the coming decades. It will finally introduce the six speakers who will review achievements and problems of Korean prehistoric archaeology according to a chronological order and of historical archaeology according to regional differences.

Forty years of Paleolithic Research in Korea: Achievements and Problems

Seong, Chuntaek
(Chungnam National University)

The present essay gives a general overview of past and future of Korean Paleolithic archaeology, which may be a timely attempt, because exactly 40 years have passed by the year of 2004 since the first Paleolithic site, Sokchang-ni, was excavated. A brief research history is reviewed along with the discussion of problems and future research directions. The 40 years of Paleolithic research sees a dramatic increase in terms of the number of discovered archaeological sites and amount of collected Paleolithic materials. Despite the great advance in the quantity of the available archaeological record, many problems remain unsolved. We still do not have a full picture of Pleistocene paleoenvironmental history. Site formation processes should be extensively analyzed in order to reconstruct the evolution of Paleolithic landscape and establish workable chronostratigraphy. A standard typological scheme of artifact collections is required to enhance archaeological analyses. Chronology has always been problematical, and we need to develop more convincing methods, both scientific and archaeological, to disentangle many problems. In this vein, the paper attempts to propose a general outline of the evolution of Paleolithic technology.

The Archaeology of the Korean Chulmun: A Brief Review

Kim, Jangsuk
(Chonnam National University)

The Korean Neolithic is also called the 'Chulmun Period,' named after the main pottery style of this period. This period, dated between 5,000 and 1300 BC, is characterized by the use of pottery in hunter-gatherer context. This paper briefly reviews the history of the Korean Neolithic studies, and discusses current issues and prospect.

Issues in Korean Bronze Age Archaeology

Pak, Yangjin
(Chungnam National University)

The existence of Bronze Age in Korea was denied by the Japanese colonial archaeologists in the first half of the twentieth century. Since then, in both north and south Korea, researches in Bronze Age archaeology have become the centerpiece of prehistoric archaeology. The initial phase mostly focused on the chronological and descriptive themes of Bronze Age sites and artifacts. Information on various types of burials and houses and different kinds of artifacts was gathered, described, classified, and dated. On the basis of this achievement, attempts to reconstruct the Bronze Age society were made from diverse perspectives. In one of most debated issues in Korean Bronze Age, the dolmen-building society was interpreted by many as a stratified society, one comparable to a chiefdom society; in recent years some have argued strongly against such views. The explosion of salvage archaeological works in the past two decades has accumulated a huge new amount of archaeological data, and as a result our understanding of the Korean Bronze Age is much more comprehensive than ever. This paper will briefly review the history of Korean Bronze Age archaeology and discuss the major developments and current issues in the studies of Korean Bronze Age. It will also suggest a few future directions and challenges for researchers of the Korean Bronze Age.

Review of Goguryeo Archaeology

Choi, Jongtaek
(Korea University)

Goguryeo(Koguryo) archaeology started with the discovery of King Gwanggaeto's tombstone in 1880, and was furthered by the field survey of tombs and fortresses in modern day Jian and Pyeongyang in the early 20th century. The research was mostly conducted by Japanese scholars before the Korea's independence in 1945, and Anak tomb no.3 was the first Goguryeo site excavated by North Korean archaeologists in 1949. Other mural painting tombs, fortresses and the capital wall were widely excavated until the late 1970s. Few systematic archaeological studies have been conducted except for chronological works by North Korean scholars in the 1970s. The 1980s witnessed a rapid increase in archaeological studies of chronology of Goguryeo tombs and fortress structures, although analysis of individual artifacts types remained an unexplored topic of study. Goguryeo pottery assemblages became synthesized and analyzed in the 1990s, while the formation process of Goguryeo kingdom was discussed. Despite significant achievements, Goguryeo archaeology still exposes many problems. These mainly come from the modern day political situation, and scholars from North and South Korea and China do not often have access to the archaeological record from other countries. The situation is getting better, but fundamental difficulties still hamper scholars from working beyond the political boundary. In this vein, recent excavations at Achasan and other Han River areas provide valuable opportunities to the study of Goguryeo archaeology.

Review and Prospect of Baekje Archaeology

Park, Soonbal
(Chungnam National University)

According to the traditional historiography, Baekje, which was one of three constituent political entities of Three Kingdoms along with Goguryeo and Silla, is believed to have been established in 18 B.C. and lasted until A.D. 660. Baekje archaeology thus deals with material remains of this ancient state of Baekje. However, current archaeological data suggest that Baekje became a statehood society only in the second half of the third century A.D. If Baekje archaeology is supposed to deal with only the statehood society of Baekje, then the temporal range may cover only about four hundred years from the mid third century to 660 A.D. This paper not only discusses these important issues surrounding the date of the formation of the Baekje state, but also reviews past and current researches on the chronological frameworks, mortuary practice, three capitals and other walled cities, foreign relations of Baekje, and finally suggests the future directions and challenges of Baekje archaeology.

Review of Shilla and Gaya Archaeology

Lee, Sung-joo
(Gagneung National University)

There was little noticeable progress in the Silla and Gaya archaeology until the later days of 1970s when the National Institute of Cultural Heritage Management (OCP) started to carry out the field research programs as a part of the culture heritage development projects of Gyeongju, the ancient Silla capital. Koreans were able to study the Silla and Gaya archaeology independently with their own methods and aims for the first time from the time of the excavations of royal mounded burials andarchitectural remains. Korean archaeologists acquired an advanced knowledge of appropriate field methods and created chronological sequences for various artifacts. During the 1980s Silla and Gaya archaeologists made an effort to describe the history of material culture based on elaborate chronological sequences, and at the same time set about to reconstruct the way that power was distributed and the relationships between polities. This was accomplished partly through academic dialogue on meaningful controversies such as the chronology of proto-historic ceramic assemblages, the distinction of the Silla "state" and Gaya "confederation". In every aspect, the 1990s was a turning point in archaeological practices of Silla and Gaya area as widespread rescue excavations began and have now produced an enormous amount of archaeological data. Excavations of burials and settlements have been performed even in areas that were once thought to be peripheral to ancient states. It has become, therefore, easier to understand the relationships between the centre of a given polity and more "peripheral areas"of Silla and Gaya. From the 1990's, not only did the excavation of the common habitation or burial sites begin, but various special sites have been excavated out to their boundaries, 100 percent. In sum, the direction and scale of Silla/Gaya archaeology and prehistory has been remarkably changed and scholars have become more interested in specialized themes or theoretically-oriented research.

Ritual and Social Stratification: the Case of Middle and Late Yayoi Period northern Kyushu, Japan

Mizoguchi, Koji
(Kyushu University)

This paper examines the character of interdependence between ritual and social stratification and its transformation in the Yayoi period, Japan. Ritual practices can be understood to constitute an autonomous sphere of communication, or a communication system, which is interconnected to other spheres of social communications in the form of making sense of them in its own, or 'self-referential'manner. With this general framework in mind the paper investigates the mortuary practices and the use and deposition of bronze implements in Northern Kyushu Middle and Late Yayoi periods in terms of their co-transformation with other spheres of social organisation.

The outcome revealed that a theme of symbolic representation in mortuary communication changed from the promotion of the sense of communal togetherness to the signification of genealogical concerns in the late Middle Yayoi. Slightly later, the ritual representation of communality began to take its material expression in the form of the deposition of bronze weapon-shaped implements. In timing, those significant changes roughly coincided with the stabilization of local settlement structures, and hence intra- and inter-communal relations, and the speaker argues that the stabilization of social relations gave rise to the emergence of exclusive access by certain groups in a community to important allocative and authoritative resources and to lay the foundation of subsequent social stratification.

Emergence and Transformation of Sedentism in the Jomon Period

Itakura, Yudai
(Kyushu University)

This paper investigates the causes and the consequences of the emergence and transformation of sedentism in the Jomon period. The examination of the polished stone axe-adze, an important subsistence tool, and the durability of pit dwellings has revealed the following stages in the establishment and transformation of sedentism.

Sedentary tendency rose during the earlier phase of the Earliest Jomon period [10000-9000yrsBP] in the southern Kyusyu region. This incipient sedentism declined toward the end of the period [around 7000yrsBP]. The Middle Jomon and the earlier phase of the Late Jomon periods [5000-4000yrsBP] saw the rise of sedentary tendency, again, this time throughout the Kyusyu region. The process reached its peak in the middle phase of the Late Jomon period [around 3500yrsBP].

The rise of sedentism, in the Earliest Jomon period in the southern Kyusyu region and in the Middle Jomon period throughout the Kyusyu region, resulted from the widening of the range of edible foodstuffs thanks to the spread of the mixed forest made up of laurel and deciduous trees and the invention of depoisoning techniques. The sedentism of the Earliest Jomon period declined probably due to the development and spread of laurel forest and subsequent decline of the range of edible foodstuffs. The study also revealed that the rise of sedentary tendency in the Middle / Late Jomon periods in the Kyusyu region appears to have given rise to population increase and the development of various social ties and networks.

Social Transformation from the Late to the Final Jomon Period in the Kyushu region, Japan

Ishikawa, Takeshi
(Kyushu University)

This paper investigates social transformation from the Late to the Final Jomon period in the Kyushu region of Japan by examining the pottery, intra- and inter-settlement structural patterns, and ritualistic material items. The study revealed that various material items, both ritual and mundane, gradually transformed their character over the period, and the trend appears to have been related to the intensification of the categorization and differentiation of the members of individual communities. The paper argues that the mechanism which gave rise to the above mentioned transformation can only be properly understood by carefully referring to general models of social organization and its transformation such as Neo-evolutionary models and their critically-modified versions.

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Dynamics of the Regional society As Seen from the Study of Yayoi Pottery

Shigematsu, Tatsuji
(Kyushu University)

The purpose of this study is to reconstruct the dynamics of a regional community in the Later Yayoi period by studying changes in the regional variability of pottery. The late Late Yayoi period of the Okayama Plain in the Inland Sea region of Japan saw the development of unique mortuary customs including the construction of tumuli and highly decorated mortuary pots. A significant transformation of social organization can be inferred to have given rise to it. By analyzing changes in the regional variability of the pottery style of the region, the following findings have been made: 1) During the late Middle Yayoi period, the inter-site similarity of pottery assemblage was comparatively high. 2) During the middle and late Late Yayoi period, the similarity began to decrease and the region became fragmented into a number of micro style zones. 3) The most remarkable point is that stylistic differences emerged in distinct manners in different shape categories. It is particularly significant that the distinct regional styles which appeared in pedestalled bowls, a particularly well-made shape-type in the assemblage, were closely related to emerging units of local integration marked by settlements and tumulus clusters. The above suggests that the identity of newly emerging units of local integration was signified particularly strongly by a pottery shape-type to which specific symbolic meanings were attached.

Production and Distribution Mode of the Yayoi Pottery of Northern Kyushu

Kanegae, Kenji
(Kyushu University)

This paper investigates the production and distribution mode of the pottery of the Middle Yayoi period (ca.B.C.200-A.D.1) in northern Kyushu, Japan. Issues concerning pottery production and distribution can be approached from organizational and economic viewpoints. In the last few years, several articles have been published emphasizing specialization and developed skills involved in the production of Yayoi pots by examining excavated pottery-making tools and misfired sherds. However, such important issues as where and how clay was obtained and how pots were distributed have not yet been sufficiently investigated. With the above in mind, sherds of the Suku-style assemblage, spread throughout northern Kyushu in the late middle Yayoi period, were analyzed by X-Ray fluorescence analysis and Petrographic thin section analysis in order to specify the location of clay extraction and clay preparation. The outcome suggests that the sources of clay were located near the settlements, and the pots were mainly used and distributed around them. This suggests a localized, rather than centralized, mode of production and distribution of pottery in northern Kyushu during the Middle Yayoi period.

The Context and Social Significance of the Small Bronze Mirrors Imitating the Chinese Originals Excavated from the Korean Peninsula

Tajiri, Yoshinori
(Kyushu University)

The bronze mirrors imitating the Chinese originals distributed widely over the Korean peninsula and the Northern Kyushu region of Japan. These mirrors, called the small imitative mirrors hereafter, are considered to have substituted the Chinese originals, and some scholars argue that they were treated as prestige goods.

It has been widely accepted that the small imitative mirrors excavated from the Korean peninsula were manufactured and used locally. However, the molds for their casting have not been found in the peninsula. The author reinvestigated the small imitative mirrors excavated from Korean peninsula in terms of their manufacturing technology and contexts. The investigation revealed that the specimens from the peninsula and from Kyushu were manufactured in an identical manner. However, it has to be noted that they were treated differently from the Northern Kyushu equivalents as far as the contexts from which they were excavated are concerned. Those suggest that the small imitative mirrors excavated from the Korean peninsula were made in Northern Kyushu, imported to and used in a distinct manner in the peninsula. The current of socio-cultural and materialinfluences came from the peninsula to the archipelago during the Yayoi period, and the case of the small imitative mirrors, according to the result of this investigation, in that sense, was a rare exception. The author argues that the different ways in which the mirrors treated in the peninsula and in Kyushu reflected different meanings attached to the mirrors and different social relations which were mediated through the exchange and use of the mirrors.

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Ritual Tooth ablation and Social Organization from the Final Jomon to the Yayoi in Northern Kyushu, Japan

Funahashi, Kyoko
(Kyushu University)

This study investigates the meaning of tooth ablation and its socio-cultural background in the period between the Final Jomon and the Yayoi in Northern Kyushu by examining a)the percentage of those who received tooth ablation among individual age/sex groups, b)attrition, and c)the pre-auricular groove of the ilium.The outcomes of the examination are as follows.

1)In the Final Jomon period, the extraction of upper and lower canines and lower incisors were carried out when the recipients were between 13 and 20 years of age, and the parcentages was 80-90%. 2)In the early Yoyoi pireod, the extraction of upper and lower canines and lower incisors were carried out, and the parcentages was 80-90%. 3)From the end of the Early Yayoi period, the extraction of upper and lower incisors, canines and premolars were carried out when the recipients were at adult and mature ages, and the percentage was low. Based upon the outcomes the author will interpret the meaning of tooth ablation in relation to marking of rites of passage.

Pottery and Social Strategy: the Introduction of a New Pottery Assemblage in the Yayoi-Kofun Transitional Period of San'in Region, Western Japan

Watanabe, Makoto
(Kyushu University)

This paper investigates the process through which the pottery assemblage originated in the Kinai region of central Japan was introduced to the San'in region of western Japan.

The pottery assemblage originated in the Kinai region came to distribute throughout western Japan at the beginning of Kofun period. The phenomenon has been understood as the reflection of the spread of the sphere of the sociopolitical influences of the Kinai polity, and related evidences such as the size hierarchy of keyhole-shaped tumuli and their distribution pattern suggest that the Kinai region functioned as the center of the interaction networks of chiefs covering the western portion of the archipelago. With those in mind the process through which the Kinai pottery assemblage called the Furu style assemblage was introduced to different areas of the San'in region was investigated.

The study revealed regional differences in the timing of the adoption of Kinai style pottery shape-types and in the process of their subsequent localization. The author argues that the differences reflected different sociopolitical strategies taken by local communities in manipulating outside contacts and the items symbolizing the contacts.

The Adaptation of Cremation Practices in Ancient Japan: A Case Study in the Northern Kyushu Region

Oda, Yuki
(Kyushu University)

This paper examines the spread and local adoption of cremation practices in ancient Japan. It has been recognized that cremation was first adopted by the upper class in the Kinai district of central Japan and diffused to peripheral regions in the transitional phase between the Kofun (mounded tomb) and the Nara period. However, regional differences in the process of the adoption have not yet been sufficiently investigated.

The author approached the issue by examining the timing of the cessation of the construction of Kofun mounded tombs and of the adoption of cremation practices in different areas of the northern Kyushu region of western Japan. The outcome revealed that a range of patterns existed in the way local communities adoptedcremation practices, and the author infers that they reflected differences in the process through which local polities were incorporated into the newly established centralized political structure of the ancient Japanese state.

Historical Review on the Ordos Bronzes and Pro-Xiongnu Culture Problems in the Northern Steppe Zone of China

Kang, In-Uk
(Seoul National University)

The Ordos Bronzes, Proto-Xiongnu Culture, and the Northern Type Bronze concern almost same archaeological phenomena : the nomad cultures and its metal remains in the steppe zone of Northern China from 15th to 2nd c. A.D., almost the Karasuk period to Scytho-Siberian period in the Eurasia. Because of the different sources and views to the correlation with China, these concepts are slightly different, and in some degree, obscure.

The main problem of the Proto-xiongnu culture theory is that the substance of Proto-Xiongnu peoples(ex,Xianyun?? and Hunzhou?)(i) in the historical text is ambiguous and probably, nothing more than mythological meaning. Furthermore, up to now at least three archaeological cultures were classified in the Spring-Autumn period, and all of these cultures are apparently occupied independent territories and differed in material culture and burial practices. Type "jundusan"(in China, it's called Shanrong culture incorrectly) located in the Yanshan mountainous region and assimilated to Yan dynasty. Type "Maoqinggou" located in the Ordos Plateau and in some degree, lived on half-pastured and sedentary economics. Type "Yanglang" located in the Ningxia Hui Autonomous province and partly qingyang region of Gansu. We shoud not ignore the correlation between the Ordos Bronzes and the Scytho-Siberian style bronze.

As to the concept of the Ordos Bronzes, I suggest that the definition of the Ordos Bronzes limits to the collected bronzes until the foundation of People Republic of China. Proto-Xiongnu culture also have to be limited to the nomad culture, existed mainly in the Ordos Plateau(type Maoqinggou). In my opinion, the Steppe culture of northern part of China could be the most fittable to this archaeological pheonomena.

Xiongnu Mortuary Analysis

Bryan Kristopher Miller
(National Chengchi University)

The majority of Xiongnu archaeology has relied upon burials across northern China, Mongolia and Southern Siberia, yet these studies have only recently begun to be integrated and more systematically reported. Recent archaeological work in Trans-Baikalia and northern Mongolia on both large scale tombs and "common" burials has brought to light numerous issues of Xiongnu burial customs and related material culture which both build upon and seriously challenge previous understandings of Xiongnu society and customs. By placing recent archaeological work within a comprehensive and dialectic framework of the greater body of Xiongnu archaeological material, we may begin to open new avenues of inquiry as well as establish research agendas for guiding further work and reassessments of previous remains. Our understanding of aristocratic burials of the Xiongnu Empire have, until recently, relied upon a handful of minimal excavations or reports and vague textual references. The recent, more systematic excavations have brought particular variables of the mortuary remains to light that were previously ignored or missed. The over-structure of the tombs, the assemblage of prestige goods, and the accompanying burials present three important variables for future Xiongnu mortuary analyses.

The Khanuy Valley International Collaborative Project on Early Pastoralism in Mongolia

Francis Allard
(Indiana University of Pennsylvania)

This talk reviews the results of the first two field seasons of the Khanuy Valley International Collaborative Project on Early Nomadic Pastoralism in Mongolia. This collaborative effort with the Institute of History of Mongolia investigates the timing and circumstances of the emergence and early development of nomadic pastoralism in central Mongolia's Khanuy valley, a region marked by numerous 'khirigsuurs', stone built ceremonial/funerary sites that date to the region's Bronze Age (second - first millennia BCE). The field project comprises a range of activities, which include the mapping of khirigsuurs and the excavation of their component structures (mounds, circles, paths and burials), surface and subsurface surveys, as well as an ethnographic study. At one large (400 x 400 meters) khirigsuur, a total of 1750 small stone mounds have been identified, each one of these apparently covering the remains of carefully positioned horse heads and vertebrae. The talk discusseshow the results of the first two field seasons inform the issues of the nature of power and the function of ritual among these early mobile pastoralists. It also briefly reviews the results of investigations at Golmod2, a large Xiongnu cemetery discovered by our team in 2001.

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Hudgiin-Tolgoi Hunnu Tombs in Mongolia

Yun, Hyeung-Won
(National Museum of Korea)

We have an national archaeological excavation project between Republic of Korea and Mongolia. It was achieved by The National of Korea, The National Museum of Mongolian History, The Institute of Archaeology Mongolian Academy of Sciences for seven years in Mongolia.

Especially we interested in Hunnu in Mongolia with ancient burial culture in Korea. Hunnu is descripted in ancient chinese records, but archaeological datum is not so much enclosed in the world. Hunnu had great power in the step area and it was influenced from Europe to far east Asia.

2001 Mon-Sol Project aimed Hudgiin Tolgoi Tumuli in Mongolia that is belong to central area of Hunnu. we selected 4tombs by geophisical method and excavated 4tombs. we investigated such tombs that may Hunnu warrior's burials. It had many kinds of artefact as pottery, bronze ornaments, horse equipment, iron tools, bones etc.

And we found human skeleton in each burial, including europian and mongoloid. in addition we calculated AMS datings from 2nd century B.C. to A.D.1st century. So we want to show about our joint work to world-wide scholors who come to Korea and it will be good chance to understand about ancient burial culture in the east Asia.

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Session 1-B
Xiongnu and Mogolian Archaeology

Pathological Cases from the Bronze and Early Iron Age in Mongolia

Naran Bazarsad
(Institute of Archaeology, Mongolia)

The pathological lesion of human skeletal remains from the Chandman burial ground of Western Mongolia that dates back to the Late Bronze and the Early Iron age. The human skeletal material was excavated between 1972-1974 during a Russian-Mongolian collaborative expedition, conducted by the archaeologists Tseveendorj (1978) and Bolkov (1972). The paleoanthropological, paleodemographic and paleopathological investigations were undertaken by anthropologist Mamonova (1978) and Naran (1997, 2003). Two types of burials were uncovered during archeological excavation of the burial ground namely, timber and stone box graves. Small size stone boxes contained single and double burials. Timber graves which are larger in size than the stone boxes contained from two to a dozen burials.

The paleoanthropological collection of the Department of Anthropology, Institute of Archaeology, of the Mongolian Academy of Sciences, was examined macroscopically, and X-rays were taken for the evaluation of pathological data. The collection consists of about 108 skulls and 156 skeletons. The various aspects of the pathological changes provide usefull information about their living nomadic circumstances and may be indicators of their health conditions. The purpose of this study is to present the pathological lesions and the outline health conditions of early nomadic populations. Many individuals suffered lesions of the bones. These are mostlydevelopmental anomalies, traumatic lesions, specifis and nonspecific infectious diseases, porotic hyperostosis, DJD, osteoarthritis. Among these pathological changes, in the Chandman samples, the nonspecific infectious diseases as the most significant factors. The effects of nutritional deficiency and the traumatic lesions are emphasized in the presentation of their living nomadic circumstances.

A Study of Environmental Archaeology on the Prehistoric Culture

Qi, Wuyun
(Institute of Archaeology, CASS)

The paper initiatelly reconstructs the evolution process of vegetation and climate for 1600 years from the period of Late Dawenkou culture to Yueshi culture based on the pollen analysis of relics samples of the late Neolithic age and the Bronze age in Upper Shu river, Shandong province. The thesis also explores the issues of human and land relationship such as interaction between the natural change and the choice of settlement sites, food structure, economic pattern and cultural progress combined with geological and geomorphologic field survey and laboratory methods such as GIS and SPSS techniques, flotation of plant remains, plant silicate and isotope analysis of human bone.

Shell middens in the Jiaodong Penninsula Studying Environmental Archaeology

Yuan, Jing
(Institute of Archaeology, CASS)

It is obvious that during the initial period when the shell middens were forming, the interrelationship between human and natural environment was mainly humans' adaptation to the environment for survival. In the developing period when the shell middens were continuously accumulating, the human influences upon environments began to occur, although human beings were still largely relying upon the environment. When the shell middens came to their end, although this was caused by both climatic and cultural changes, it seems that the cultural changes played a more important role. This indicates that human beings began to become more dynamic in the interrelationship between human and the environment.

Maritime Adaptation and Agriculture in the Neolithic of Coastal Southeast China: Implications for Proto-Austronesian Expansions

Jiao, Tianlong
(Bishop Museum)

Recent archaeological investigations have documented new evidence for studying the development of maritime adaptation and agriculture in the Neolithic of coastal Southeast China (ca. 6500-3500 B.P.). The early Neolithic people were well adapted to ocean life, as evidenced by the large number of marine shellfishes and fishes. Starting around 5000 B.P., the Neolithic people on the coast of Southeast China had developed different adaptation strategies in different regions. People living on off-shore islands developed a specialized ocean foraging strategy, while the diet of the people on the mainland might have been supplemented with domesticated animals and possibly rice. At least by 4300 B.P., rice agriculture was well developed in Southeast China. Barley and wheat also diffused to this area around 4000-3500 B.P. However, archaeological evidences suggest that the Late Neolithic people still heavily relied on marine resources.

The transformation of the subsistence patterns in the Neolithic of Coastal Southeast China was vital for investigating the impetus of the proto-Austronesian dispersals. Our new discoveries suggest that both maritime foraging and agriculture had played important role in the life of the proto-Austronesians. The driving forces of the proto-Austronesians from mainland to the island of Taiwan need to be understood from a much broader perspective.

The Study of Environmental Reconstruction and its Application

Jia, Wei Ming
(University of Sydney)

Palaeoenvironmental study applied to archaeological research has developed quickly in China in last two decades and strongly influence Chinese archaeological research. But this study is still in its early stage, because it is still immature, problematic and sometimes misinterpreting data. Some archaeologists in China have attempted to interpret past environment from climatological data. But their attempts have been speculative and unreliable because of lack of knowledge in basic theory and methodology of environmental reconstruction. Misleading ideas and simplistic methods have dominated environmental archaeology in China throughout this premature stage. A conservative aspect of Chinese environmental archaeology is that archaeologists presume that human settlement and agricultural economy in the past usually indicate a warm and humid environment. This meant that when archaeologists found the evidence of human habitant and farming economy, they would claim that there was a warmand humid environment. The general definition of Holocene Climate Optimum in Europe has been directly brought into Chinese environmental studies; generating a simplistic theory that warm and humid climate existed in northern Chinese plain, which has resulted in flourishing of human habitant and agricultural economy. This misleading theory is commonly used in Chinese environmental archaeology (Chinese Academy of Geoscience 1977; Zhou et al. 1984). Based on the principle of environmental reconstruction and pollen data derived from several sites of north and northeast China, this essay try to discuss some problems in Chinese environmental archaeology and illustrate the basic method of framework for interpreting pollen data and reconstructing past environment.

Preliminary Study on the Prehistoric Disasters at Lajia Site, Qinghai, China

Xia, Zhengkai
(Peking University)

Lajia Site, located near the upper reaches of the Yellow River and the border of the Qinghai Province and Gansu Province, is a large-scale site of the Qijia Culture. In 2000 and 2001, archaeologists excavated an unusual scene of prehistoric dramatic and miserable disasters. Lots of geologic-geographic evidences revealed that the Lajia Site was ruined by coinstantaneous disasters. Mainly floods from the Yellow River and earthquakes, accompanying mountainous torrents. Study on thesedisasters and their driven forces could provide us not only the knowledge on the paleaoenvironment of the area, but also offer us a valuable site to assess the influence of the natural disasters on human civilization development.

Effects of Holocene Environmental Changes on the Development of Archaeological Cultures in Different Regions of China

Mo, Duowen
(Peking University)

Niuheliang Site in the west of Liaoning Province, Miaozigou Site in the south of center Inner Mongolia, and Dadiwan Site in the east of Gansu Province are all the important Neolithic archaeological sites in North China. Niuheliang Site of Hongshan Culture reflects some characteristics of early civilization. The Miaozigou Culture only continued for about 500 years due to the expansion of the late stage of Yangshao Culture. Dadiwan Site is located in the Hulu River drainage in the middle Loess Plateau. The first stage of Dadiwan Culture was one of the earliest centers of agriculture in North China. Human activities here lasted for nearly 3ka because of the relatively close and favourable local environment. The paleoenvironment of the three regions is restructured by the analyses of sedimentary characteristics, clay minerals and sporo-pollens. Based on the comparative studies of cultural characteristics, geographical localities, environmental changes, and the relationships between paleoenvironment and ancient cultures, some conclusions can be worked out as follows.

(1) The areas experienced the similar climatic fluctuations during the Holocene Megathermal. It shouldbe attributed to the fact that they are all located in the temperate zone of North China where the Eastern Asian Monsoon drived the climate change.

(2) Besides the similarities of environmental changes, the differences between the regions are obvious too. The hills in the west of Liaoning Province represented the relatively humid climate with more precipitation, and the Loess hills where Dadiwan Site is located had the higher temperature because of the lower latitude, while the Holocene climate of Huangqihai area was drier and cooler than the others.

(3) All of regions are very sensitive to the climatic changes because they are on the edge of Neolithic agro-culture region. At about 8kaB.P., not long after the beginning of the Megathermal, agriculture developed quickly in the Dadiwan area and the west of Liaoning Province. This trend continued until 6kaB.P. and the cultures kept pace with Zhongyuan(middle North China) area. The climate became slightly drier and cooler during the period of 6 -5kaB.P. but didnot cause an negative effect on the development of agriculture in the two regions. The expansion of the late stage of Yangshao Culture must be caused by the progresss of culture itself, and also may be concerned with the contradiction between human being and land caused by enlarged population and deteriorated climate.

Because of the unfavourable natural conditions such as climate, landform and land available for agriculture in Huangqihai area, human activity before 5.5kaB.P. has never been found. Then, thecontradiction between human being and land emerged in each agriculture area and forced some people to immigrate here. The paleoclimate became much drier and cooler after 5kaB.P. and arosed an intensively impact on the archaeological cultures in North China, not only made the short-lived culture in the Huangqihai area disappeared, but also the relatively advanced archaeological cultures in the west of Liaoning Province and the east of Gansu Province declined obviously. However, ancient cultures in Zhongyuanarea where the precipitation and the temprature were higher than the mentioned- above three regions, still kept improvement marked with the emergency of thriving Longshan Culture, and then steadily entered into civilization times.

Holocene Environmental Change and Agricultural Opportunism in the Development of Early Complex Society

Arlene Rosen
(University College London)

Geoarchaeological research was initiated in Henan Province, China in order to sketch out a general picture of Holocene landscape changes and how these might have impacted the development of complex society in the Yiluo Basin from Mid-Holocene Peiligong times (6000 BC) through the Bronze Age Erlitou Period beginning at 1900 BC. The study was conducted within the context of an archaeological survey and excavation project directed by L. Liu, X. Chen, and Y.K. Lee. This research allowed us to construct a general model of significant environmental changes that would have impacted past societies living in the study region. Preliminary results indicate that the Peiligong period took place during an episode of warmer and wetter climatic conditions than at present. In the Yiluo catchment area, rich dark soils developed in well-watered valleys that were characterized by stable perennial stream systems. This provided a productive environment for the first Neolithic millet farmers. A major landscape change occurred during the succeeding Yangshao period. Stream valleys began to fill with silty alluvium in response to major hydrological changes and greater runoff. This alluvium provided the Yangshao Period farmers with the opportunity togrow rice in naturally irrigated fields. The presence of a rice-economy was confirmed by phytolith analyses from Yangshao and Longshan Period ash pits in the Yiluo Basin. Geoarchaeological investigations in the vicinity of the site of Huizui showed that in the late Longshan period, this valley alluviation continued to provide broad well-watered valleys. However, by Erlitou times, this alluviation came to an end and the streams of the Yiluo catchment cut down to depths over 10 meters and began to narrow their beds. This downcutting coincides with other regional evidence for drier climatic conditions after 1900 BC. This would have had a major impact on the Early Bronze Age societies at that time by reducing the amount of agricultural land available for intensive irrigation farming, just at the time when larger populations were being organized into a more complex level of social and political hierarchies. Future research from the site of Huizui and others in the Yiluo Basin will attempt to determine how Erlitou populations adapted to these drier climatic conditions by importation of rice and other foodstuffs, or by developing more sophisticated systems of intensive agriculture.

Zooarchaeology in the Prehistoric Three Gorges: A View from Zhongba

Rowan Flad
(Harvard University)

Zhongba is one of the most important sites among the many recently excavated in the Three Gorges dam reservoir area. The cultural deposits at this site are more than ten meters in some areas and provide a comprehensive perspective on historical and environmental changes in this region from the late Neolithic through the end of the Bronze Age. Excavations at this site between 1997 and 2002 revealed extensive cultural remains related to these changes and associated with intensive, specialized salt production. They include vast amounts of pottery, stone tools, other small finds, and animal bones. These last data were recovered using wire mesh screens and rigorous sampling techniques to ensure a representative sample. They show that fish became increasingly important over time, and that the diversity of mammal fauna also increased. I suggest that these patterns relate primarily to changes in the organization of production at the site, while also revealing some trends in the surrounding environmental conditions that prevailed at different points between the end of the third millennium BC and the end of the first Millennium BC.

Water Shortage in an Oasis-region in Western China in Yuan Dynasty and the Last Decades

Nakawo, Masayoshi
(Research Institute for Humanity and Nature)

Vast arid and semi-arid regions are extended in central Eurasia, where water resources are mostly dependent on glaciers distributed in high mountains surrounding the arid regions. Shortage of waters has become a big issue in the arid regions, for example in the Heihe River Basin, where the shortage forces the local people to move and change their lifestyle. With an increasing trend of air temperature inassociation with the global warming, however, the amount of river discharge from glacierized basin should have been larger than the total sum of the precipitation over the basin, because a shrinkage of glacier associated with the warming should provide with an additional water to the rivers.

In the basin, there are many ruins in the desert that indicate the long history of the region for more than 2000 years. No water, however, is available at present around the sites of the ruins, indicating a significant change, during the historical time period, in water circulation system over the region. A cooling trend in air temperature, near the end of Yuan Dynasty to the beginning of Ming Dynasty, was inferred from an ice core analysis, which is in contrast with the present situation. The cooling trend indicates that discharge water is smaller than the total sum of the precipitation, possible leading to a water shortage at that time.

It is of interest that water shortage takes place both in recent period with warming temperature, and near the end of Yuan Dynasty with a cooling trend respectively. It is considered that the role of human impacts would be different at different time periods for the changes in water resources, although peak populations, at Xixia to Yuan Dynasties, were close to the present population.

Subsistence Patterns of Korean Neolithic: Osanri and Jigyeongri Adaptations on the East Coast of Korea

Song, Eunsook
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The Neolithic on central-eastern coast Korea is divided chronologically into Osanri and Jigyeongri phases. Osanri phase(early Neolithic) was an adaptation heavily dependent on salmon fishing, and Jigyeongri phase(middle-late Neolithic) was a mixed economy. Composite fishhooks and fish processing tools dominate stone tool assemblage of Osanri phase. During this phase, seasonal residential movement was praticed for salmon fishing, thus it was an economy with high efficiency but low stability. To the contrary, assemblage of Jigyeongri phase consists mainly of grinding stones, net sinkers, and points, showing it was an inland-oriented mixed economy with lower efficiency and higher stability compared to Osanri adaptations. Around 4000 BC when the temperature became very warm, Osanri adatation which had depended heavily on salmon was replaced by Jigyeonri adaptation suggest that the change did not take place indigenously, but resulted from population migration from other areas. After the apperance of the Jigyeongri adaptation. Discontinuity between the two phases and the abrupt appearance of the Jigyeongri adaptation, the number of sites dramatically increased and site duration became much longer.

Analyses of Firing Conditions of Pottery Vessels from Neolithic to Joseon Period

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Korean potteries were produced over the Ages of Neolithic, Bronze, and Iron Age throughout the periods of the Three Kingdoms, United Shilla, koryo and Chosun. In such periods there appeared potteries that were fired harder at a higher temperature. The process and technique of pottery production, especially firing temperature, are often subjects of curiosity as firing pottery at a higher temperature would mean progress in production process. In order to study those subjects the writer and coworkers made approximately 20 cases of ceramic analysis, in consequence of which various interesting facts were detected. The results of the analyses are as follows : 1) The raw materials used in the production of potteries of Neolithic and Bronze Ages are Kaolinite, Illite, Chlorite, montmorillonite, and mixer layers. All these constituents were evenly used and well mixed. Coming into the Iron Age there appeared potteries of silt. In other words, soft clay replaced viscous clay. 2) According to the development of production technique, quartz became homogenous tempering material, and only small quantities were used. 3) Potteries firing temperature apparently progressed as an age(period) got into another. potteries from Neolithic to Bronze Age : 550-800 C degrees plain hard pottery of the Iron Age : 900 C degrees potteries of the Three Kingdom Period : Over 1000 C degrees in consideration that mullite and crystobalite were detected. potteries of Chosun Period : over 1100 C degrees.

Cultural Interaction Between Korea and Northeast China During the Neolithic Age

Im, Hyo-Jai
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New excavations in both Korea and northeastern China have shed new light on the relationship between Neolithic cultures in these regions. This paper considers the pottery from these sites in seeking to understand how Korean and Chinese sites are related. Characteristics of the pottery that are particularly indicative of relationships are the shape decoration of pottery vessels, the temper, paste, and manufactureare also related. While sites in northeast China have only flat-bottom pottery vessels, in Korea the earlier bases are flat, but later ones(in the Chulmun period) are conical. Nevertheless, the conical-based pottery bears external incising and impressing that is similar in pattern to pottery produced in northeast China It is concluded that eastern Liaoning, especially the Liaodong peninsula, had close cultural contacts with Korea.

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A Consideration of the Residential Practices During the Korean Bronze Age and Its Family System

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Reviewing general understanding of residential practices of the Korean Bronze Age and its family system has been done. Because they are related minimum social unit as a consumption and production unit. Investigating changes in floor plan of the dwelling sites over time in each region has been done. In addition the economic basis of the Korean Bronze Age has been considered to check which family type would be more adaptible to the subsistence type such asintensified rice agriculture. Examples of extended family type in the agricultural villages during the Joseon Period(1392-1910) have been used as historical ethnographic data. This analogy must be historically direct relational analogy in some sense although there remains a lot of problems. These risky problems will be challenges of future research directions.

A Social Reconstruction of the Korean Bronze Age: Based on the Dolmens Discovered in the Southeastern Korea

Kang, Bong Won
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Dolmens are considered one of the principal mortuary programs in the Korean Bronze Age (ca. between 1000 and 300 B.C.). A great amount of research has been conducted by Korean and Japanese archaeologists concerning dolmen burials and their accompanying artifacts. Although many researchers still retain a traditional archaeology, some scholars became interested in a social reconstruction and they have asserted that Korean dolmen society reached chiefdom. This issue has been one of the hottest research topics among Korean archaeologists and historians and foreign archaeologists who have been involved in Korean archaeology. The outcome of this research in terms of socio-political typology is not important per se. It is important because it will be a starting point in examining formation of the early state in the southern portion of the Korean peninsula. A number of Korean scholars have taken it for granted that Korean dolmen society reached a centralized political. This paper based on the analyses of spatial distribution of dolmen and artifacts recovered from the burials argues that the dolmen society in the southeastern part of Korean peninsula and Korean peninsula in general remained egalitarian.

Cultural Contacts and Cultural Changes: the Bronze Age Society in Chungnam Area in the 8-6th Century B.C.

Lee, Hong-jong
(Korea University)

Korean Bronze Age culture went a drastic change around 800 B.C. with the appearance of the so-called Songguk-ri culture that included a full-scale agriculture of wet-rice cultivation. The Songguk-ri culture differed from the earlier period not only in archaeological record such as houses and pottery, but also in settlement landscape, land use and other overall cultural pattern. Since these new elements first appeared in the western coastal area of southern Chungcheong province and they are very distictive from earlier ones, it is possible that the Songguk-ri culture may have diffused from the area south of Shandong peninsula of China.

The Songguk-ri culture that first appeared in the western coastal area spread into the whole region of southern Chungcheong province following three routes and made contact with local cultures in each area. In this process, new house and pottery styles sometimes blended with local counterparts or either styles remained intact. These archaeological data suggest the introduction and diffusion of wet-rice cultivation took different process in each area.

Regional differences of the Songguk-ri culture can allow us to divide the southern Chungcheong province into western coastal, northern, southern, and eastern areas. Both western coastal and southern areas show the spread and completion of the Songguk-ri culture. The northern area shows the local society selectively accepted the Songguk-ri culture with little change in pottery style. The eastern area also shows strong local elements that are somewhat weaker than in the northern area. The regional contact of the Songguk-ri culture and consequent regional differences may be due to the combination of various factors such as the scale of local community, economic landscape, willingness to adopt a new economic system, and so on.

South-central Korea and the Development of Complex Societies, circa 300BC to AD 400

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Archaeological approaches to the period 300 BC to AD 400 in the Korean peninsula have overemphasized the analysis of mortuary features, grave goods, and historical texts. Studies have focused on regions associated with groups named in ancient texts such as Byeon and Jin. This research agenda has contributed to a skewed understanding of the formation of archaic states. Excavations in the south-central region (Nam River basin and coastal area to the immediate south) in the 1990s yielded important archaeological data from this period. In this paper we survey and interpret settlement and mortuary data from this region to better understand the role of the south-central region in the formation of archaic states. Ditch-enclosed political centres and large-scale megalithic burials appeared in the south coastal area starting around 300 B.C. Bronze production was important, and evidence of conflict appeared. In the period following elite settlements, ports that traded with polities in Kyushu, labour-intensive burials, and iron production developed in a number of local polities.

Ancient Economic Zone and the Establishment of Administrational Zones Based on the Circulation of Traditional Regular Markets

Lee, Sungjoon
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The results of an investigation of excavating locations in Neungsan-ri(陵山里) in Buyeo(扶餘) and Gunsu-ri(軍守里), which was carried out by Paekche Research Institute in Chungnam National University, provides a new understanding of Sabi, the walled capital of the Sabi period of the Paekche dynasty(百濟). A report has been published which details the findings of the 2003 excavation project. The excavation report on Sabi walled capital not only includes the contents of the excavation, but also carefully deals with the demarcation of spaces inside of Sabi walled capital, and the detailed application of spaces in Gunsu-ri. Sabi walled capital was constructed by urban divisions within a definite space.

Since relatively concentrated archeological investigations have been made within a specific space, the assumption of how space divisions were achieved has authenticity. In addition, modern measurement technologies such as Global Positioning Systems (GPS) and comparative examinations with walled capitals in other areas, provide helpful tools to investigate the structure of spaces within walled capitals.

Meanwhile, an investigation of the structure of spaces in the outside area of Sabi walled capital, which was constructed during the same period as ones within the capital, have not generated specific results owing to insufficient archeological research and limited historical literature. Specifically, concerning the issue of the demarcation of local administration areas and urban centers, researchers depend on their academic intuition and the subjective interpretation of documentary records. In this thesis, to overcome the limitation that results from insufficient historical documents, I will apply a traditional marketing area to establish a more objective approach for an investigation of the structure of spaces in the outside area of Sabi walled capital. For this research, first, I will explain that there is a correlation between forming traditional market areas and administrative areas. I admit that many ethnoarchaeological investigations of the Western world have demonstrated that a few factors of social sectors could not satisfy archeological judgements. However, in the current step where there are insufficient archeological records and historical literature, I argue that to reveal the correlation between forming traditional market areas and administrative areas is a better approach for investigating the structure of spaces in the outside

area of Sabi walled capital.

For the traditional market zone, I will borrow a historical document of the late Choson dynasty (朝鮮), titled Yimwon Kyungjeji(林園經濟志), which means "economic encyclopediaof botanic gardens" and set the geological limits and economical circulation focused on the circulation of the regular markets of Gongju(公州), Nonsan(論山),etc. For this division, more specific preconditions are required, such as why regular markets with the same opening date had different economic circulations, and why there are hierarchical differentiations between regular markets located in a single economic circulation. After reviewing these preconditions, I will set a more objective market zone by analyzing the regular markets of investigated areas. On the basis of this analysis, I will present a research method for the investigation of the structure of spaces in the outside area of Sabi walled capital.

Mural Painting Tombs from Goguryeo and Chinese Gansu: A Comparative Study

Kang, Hyun Sook
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Mural painting tombs were constructed during the Xihan period in the political center, while disappeared after the collapse of the Han dynasty. Afterwards, they were widely introduced to Goguryeo, and modern day Liaoning and Gansu areas, China. Goguryeo tombs during the fourth and fifth centuries AD were constructed using stones, and all the walls were painted with daily lives and the ceil was decorated by painting symbolic features such as the sun and moon (Fig 1 and 2). It has been believed that the appearance of mural painting tombs in Goguryeo reflected the cultural influence from China, and Liaoning in particular. However, painting tombs in Liaoyang and Chaoyang of Liaoning show several differences from those of Goguryeo. In the Liaoyang tombs, coffins were placed in a parallel direction, while those of Goguryeo show longitudinal arrangement. Mural chambers of Chaoyang tombs are parallelogram in shape, while Goguryeo tombs expose square plan form (Fig 3). Paintings also show different patterns: Liaoyang and Chaoyang tombs were painted predominantly with daily lives, while various symbolic elements were expressed in Goguryeo tombs. On the other hand, paintings suggest close affinities between Goguryeo and Gansu tombs. Gansu muralpainting tombs were identified in Wuwei, Juiquan, Jiayuguan and Dunhuang. Gansu tombs were influenced by Han mural painting tombs with some regional elements added. Juiquan tombs, in particular, are close to Goguryeo tombs in various aspects, including the longitudinal arrangement and painting patterns of daily lives on the wall and symbolic elements on the ceil (Fig 5). Differences are also recognized between the two: Gansu tombs were constructed with bricks and Taoist and Buddhist elements were not painted. Similarities between the Goguryeo and Gansu tombs suggest cultural relationship between the two regions, as reflected by figures from the western region painted in Goguryeo tombs. Given the Juiquan's geographical location, it is possible that Goguryeointroduced cultural elements from the west via Juiquan. The cultural contact between Goguryeo and Quian Quin also supports the possibility. China during the late fourth century AD was divided into three dynasties, Quian Yan, Quian Quin and Dong Jin (Fig 6), and Goguryeo introduced the Buddhism via Quian Quin in 372AD. This suggests Quian Quin played a role of gateway from which Goguryeo introduced various cultural elements from the western region.

Burials and Construction Context of the Janggo-shaped Tombs

Yim, Youngjin
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Janggo-shaped tombs investigated in the Youngsan River Valley of southwestern Korea are considered to provide an important clue to understanding the relationship between Korea and Japan in ancient period. Since the shape of these tombs are identical to the Keyhole-shaped tombs in contemporaneous Japan, various models regarding who were buried in them and why they were constructed in Korea have been proposed. They are,

(1) Indigenous elite model: Elites in the Youngsan River Valley, who had a rivalry with Baekje and independently interacted with Japan, were buried in them. (2) Japanese delegates model: Burials were Japanese delegated for trade. (3) Japanese delegated by Baekje model: Burials were Japanese who were delegated by Baekje to control local power. (4) Japanese refugee model: Burials were political refugees from Japan.

The fourth model is the most likely for following reasons. First, Janggo-shaped tombs in the Youngsan River Valley are scattered in areas outside Naju, the political center, which lacked local power base. Second, their structure is stone-chamber tomb as is the case in northen Kyushu equivalents. Third, the dates of the tombs ranged only between the late 5th and early 6th centuries. These strongly suggest that the burials of the Janggo-shaped tombs were elites from nothern Kyushu who came to Mahan as political refugees to escape from Yamato's expansion. The existing view that southwestern Korea was merged into Baekje in the 4th century fails to explain theexistence of Janggo-shaped tombs in these area. Instead, Janggo-shaped tombs in the Youngsan River Valley indicates that Mahan remained as an independent local polity until the early 6th century.

Rethinking Sopohang: Evolution of Neolithic Site in North-east Korea

Andrey Zagorulko
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Recently, there are a lot of studies devoted to the localization of cultural regions during Neolithic Age in Korean peninsula. Most of these regions had special features, though basal cultural indicators were the types of ceramics. Practically each investigation has considered that neolithic sites of Eastern part of Northern Korea had formed the special cultural region in each stage (early, middle, late) of Neolith.

The most well-known site in north-east region is(Kulpo)Sopohang, which had included the Paleolithic, Neolithic and Bronze Age cultural layers. So one could find there complete cultural chronology of the whole region. North Korean archaeologists had distinguished: two Paleolithic layers, five Neolithic and two Bronze Age layers.

Thus, Sopohang had presented cultural scale, indicating the processes which took place in this region, in particular the evolution of Neolithic cultures and transition from Neolith to Bronze Ages. The excavations at Sopohang were finished in 1964. Since, it appeared a lot of archaeological data concerning with Neolithic culture in North East of Korean peninsula and neighboring regions. In Primorie province(Russia) archaeologists had identified new Neolithic culture named Boisman. The Boisman neolithic ceramic was not found in Sopohang, though the same type of decoration and form were known from neighboring neolithic Rajin site. Zaisanovka culture appeared to be divided by two stages. Indeed Bronze age ceramics had differed from the ceramics of Chodo and Bomui-kusok sites. So it became rather complex to use the Sopohang cultural chronology for reconstructing of regional processes in Neolith because it did not reflected the some important cultural changes.

In this situation it is important to attempt to specify distinguished cultural layers of Sopohang site (except of Paleolithic ones.

Emergence of the Oldest Pottery and "Oshipovka Culture" in Russian Far East

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Emergence of theOldest Pottery in Asian Far East is not only currently hot topic in East Asian Archaeology, also in world archaeology. Since 1990 years, many researchers has discussed about it. As well known, in this area had been found the oldest pottery around 13-12 ka BP. (it is not calibrated dating). Those complexes that included the oldest pottery, we can present in Russian Far east ("Amur" river basin and the Maritime region) and in Japanese islands (Honshu island and Kyushu island). Archaeological complex with the oldest pottery are placed in the early stage in Neolithic culture in continental side, on the other hand, the initial stage Jomon culture in Japanese island. Although, it is clear that those complex has looted far eastern microblade industries, characterized the wedge-shaped core technology (it is included some of variations of "Yubetsu microblade flaking method"). Those complexes have same roots or quite different basement. It is important archaeological discussion, but is not simple. In order to solve that matter, it is essential to organize the comparative research with international cooperation. And also it is necessary to examine on the same archaeological context and to compare with worldwide point view.

We have been excavated and continued Joint research project about the transition late Paleolithic to early Neolithic in the Lower Amur basin. In this paper will be present current results for the our joint research and consider the role of the "Oshipovka" culture in the Transition period the late Paleolithic to the early Neolithic on East Asia.

The Plant Cultivation Dynamics of the Early Agricultural Societies of Primorye Region

Helena Sergusheva
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For the present time the periodization of the Late Neolithic of Primorye region connects with the Zaisanovka cultural tradition completely. There are three phases of the Zaisanovka cultural tradition evolution (early, midden and late). According to the opinion of most of investigators the agriculture was the component part of the Zaisanovka people subsistence. But up to now there were not direct evidences on agriculture. We made an attempt to clarify there was a dynamics of the plant cultivation on the early and late phases of Zaisanovka cultural tradition in continental zone of Primorye on the base of the direct and indirect evidences. Moreover we the are more useful for approaching problems of the evolution agriculture (and early agriculture too). We analyzed and compared the direct and indirect evidences of the plant cultivation from two Neolithic sites of Primorye: Krounovka-1 (early phase of Zaisanovka culture) and Novoselitche-4 (late phase of the Zaisanovka culture). The main attention was given to the analysis of the direct evidences of the agriculture the cultural plants remains.

Both sites attitude to the different phases of the Zaisanovka cultural tradition. Krounovka-1 site has data 464040 . . (Beta 171662) 479744 .. (NUTA2-5281). The site belongs to the Early phase of the Zaisanovka cultural tradition. We got the domesticate millet caryopses of two species: broomcorn and foxtail millet (Panicum miliaceum L., Setaria italica L.(?) from two pit dwellings by the water flotation. For the present day these seeds are the earliest direct evidences of the agriculture in the Neolithic of Primorye.

Novoselitche-4 site are dated 384070 .. (⅜-13400) 3755 35 .. (⅜-36748). The site belongs to the Final phase of the Zaisanovka cultural tradition. A lot of the cultural millet seeds (more than 400) of same two species (Panicum miliaceum L., Setaria italica L.(?) were found on the pit dwelling by water flotation.

Thus there are not the divergences on the list of cultigens cultivated on two sites. On both sites the broomcorn millet prevailed on the crops. But the number of millet seeds from Novoselitche-4 site is more numerous (460 seeds) than that from Krounovka-1 site (13 seeds). There are the divergences betweenthe lists of the stone tools used for agriculture on the sites. There is the only grinding stone on Krounovka-1 site. We did not find axes, knifes or anything else. But there are a lot of agricultural tools from Novoselitche-4 site. There are axes, semi-lunar knifes, grinding stones. The forms of these tools are

advance.

So the dwelling and site areas are employed for indirect evidences of the adaptation successful of the early agricultural societies. The dwelling area on Krounovka-1 site is not more than25 m2 . The dwelling area on Novoselitche-4 site is 42 m2 . Thus there is the range of data (direct and indirect) clearly show the positive dynamics on the plant cultivation of early agricultural societies in the continental zone of Primorye region in III-II th. BC. We can see advance in agriculture connecting with increasing of number of seeds, set of agricultural tools and size of dwellings in continental part of area of the Xaisanovsky populations.

Environment Changes and Migrations: A Case Study

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The North-Western part of the Sea of Japan Basin is characterized by combination of both tropical and sub-arctic climatic influences, complicated costal and continental relief, and opposing streams of hot and cold currents. These conditions resulted in a highly patchy ecological landscape. The most interesting area of the Eastern Sea of western coast is that of Peter the Great bay (Southern Primorye), which is usually considered as a separate cultural region that created unique prehistoric cultures. One of the most interesting questions is how cultural traditions changed, what reasons and mechanisms it had.

Now we can mark out two turning-points in Middle and the beginning of Late Holocene when notable changes in region cultural traditions happened. The first is dated about 4.800-4.300 BP, and the second - about 2.400-2.200 BP.

1. Ecological circumstances What changes in environment took place at those intervals in the coastal zone and inland? According to paleogeographic data we can point out that:

1. Environmental change during first period was similar but more dramatic than the second one.

2. During these periods costal zone became non-convenient for marine fishers-hunters because considerable changes of landscape and seascape structures took place and usual for the population resource base was destroyed. At the same time costal zone became more attractive for cultivators because of more stable precipitation. Thus there were formed the conditions ejecting surplus part of cultivators from continental zones into coastal ones.

2. Subsistence and cultural changes.

The first time interval. It was the period of cultural changes in the region. From this period there was the change of cultural tradition from comb-impress ceramic to incised ceramic at the Western part of the Eastern Sea. In the Primorsky territory it led to disappearance of Boisman culture and to appearance of the Zaisanovsky cultural tradition.

We can point out the following reasons for the fact that the Zaisanovsky cultural tradition appearance was caused by new cultural groups migration into Primorye:

1. appearance of new ceramic tradition (design and technology of marking);

2. changes in stone tools production, in set of stone tools and using of other row materials for them;

3. new subsistence systems - cultivation of millet;

4. change of settlement pattern;

Thus, appearance of the sites of Zaisanovsky cultural tradition was connected with wave-type spread of population of early millet cultivators from North-West of Korean peninsula and Southern Dunbei. From that time the first stage of adopting agriculture in Primorye region began.

The second time interval coincides with the beginning of the second stage of adopting of cultivation in the Eastern Sea Basin near 2400-2300 BP and is connected with spreading of millet , barley , wheat cultivators in the North-Western (Krounovsky culture from ca. 500 BC - at least 200-300 AD) and rice cultivators (Yayoi culture) in the South. Expansion of both cultures began approximately simultaneously near 3 c. BC. The start of moving can have been initiated by changing of ecological and social circumstances.

After 3 c. B.C. populations of Krounovsky culture occupied most part of area of Yankovsky culture in coastal zone.

Conclusion - There is some ecological similarity in the expansion of cultivators for both turning-points. - The cooling of climate and fall of sea level precede cultural changes in both turning-point intervals. - In both cases we can see preceding decline of maritime economics and depopulation of coastal groups of Boisman and Yankovsky cultures. - In both cases environmental conditions pushed out surplus part of cultivators from continental to the coastal zone.

Evolution of the Bohai Tail and Periodization of Buddhist Temples

Evgenia Gelman
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The problem of a periodization for Bohai sites is very complicated as there are not firm data. For Bohai sites from Russian Primorye this problem partly can be resolved through examination of evolution of tail from Buddhist temples. Five Buddhist temples were excavated on the territory of Russian Primorye. Four of them are solitary buildings and are located outside any settlement in the basin of the Suifun river (Kopytinskyi, Abrikosovskyi, Borisovskyi and Korsakovskyi temples). Only Kraskinskyi temple is situated inside the walled town and consists of few edifices within the bounds of the temple wall. Evolution of the Bohai tail is traced in form, size, decoration, technique and technology of making of all tail. But especially clearly alterations become apparent in form of the Bohai upper tail. All upper tail from Buddhist temples of Russian Primorye is divided by shape of narrow edge in three types:

- I type has 3-4 grooves on the narrow edge of upper tail;
- II type has only plain surface on this edge;
- III type has step on the narrow edge, on which there is a groove.

All three types were found only in the Kraskinskyi temple. They were excavated in different edifices and deposits existing in time one after another.

Not numerous samples of the tail of I type was found too in during excavation of Kopytinskyi and Abrikosovskyi temples where tail of II type is predominated. Study of the dcor on the upper tail of both temples showed that Kopytinskyi temple existed early then Abrikosovskyi temple. Part of the upper tail from first site was used for roof of Abrikosovskyi temple.

Only tail of III type was found at Borisovsky and Korsakovskyi temples. Thus it is possible to do correlative scheme of being of all Buddhist temples from Russian Primorye:

1 stage Kopytinskyi temple and down level of Kraskinskyi temple;
2 stage Abrikosovskyi temple and middle level of Kraskinskyi temple;
3 stage Borisovskyi temple, Korsakovskyi temple and upper level of Kraskinskyi temple.

Excavation of Bohai Tomb in Primorye in 2003

Yuri Nikitin
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In August, 2003, we had found and excavated the first grave of Bohai period, near to Kraskino ancient town. Many years of research activities of the site, which is playing an important role for Bohai archeology, includes 10 years of international archeological cooperation. However, at attempt to find out the burial sites of Bohai period in 1991-1993 years, were excavated some tombs of Jing period. Therefore, discovery of the first burial site of Bohai period is very important fact for the further researches.

The tomb was discovered at 300 m to northwest from the western gate of Kraskino walled town on the earthen platform, which towered above boggy plain near the coast of a small river gulf. There was no any surface attributes and the tomb was found only because of using tested device, first several stones were found on depth 40 - 50 cm. After removing a humus level and making a cleanup for several times, it became obvious, that we found the ruins of a burial construction.

The tomb was constructed like a correct rectangular stone chamber by the flat stone plates. The size of stone construction is almost 4 meters from the north to the south and 3.4 meters from the west to the east. Very accurate stonemasonry of the chamber has three lines of the stones, which were putting in six levels. It was used a clay to fix up the stone construction at the bottom part, especially at internal side. A small dromos was built at the southern side of the chamber, the entrance of the dromos was closed by several big The tomb was destroyed at the ancient time, and so these boulders were budged from it's original position. The main part of a big stone cover-plate of a chamber was broken and its fragments were and thrown out of the east and west walls of a crypt. There was a trace of a tomb at the down level of the northern part of the chamber and was separated from its southern part by a stone wall which was also destroyed. The was no any traces of a coffin, human bones and fire inside the tomb.

Some remains of the iron belt were found under a stones blockage and a layer of clay at northeast corner of the bottom of the tomb. This remains consist the buckle, four rectangular, three oval metal plates and a tip of a belt. Safety of a belt is poor, sothere was no any traces of a leather, with an exception of several rectangular and oval little plates, fastened on the internal side of a belt. In gate area was found a single ceramic fragment - a fragment of a circular gray clay pot. Similar stone chambers and belts, are well-known at other Bohai burial sites in northeast China (for ex. Beida, Dongning, Liudinshan etc.) and Chernyatino in Primorye region.

Rethingking of Leixingxue

Chen, Pochan and Rowan Flad
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Leixingxue, the study of artifact typology, has been used as the fundamental research approach in Chinese archaeology. It is widely used in ceramic research and has proved its ability in stylistic analysis, especially chronological research. However, its premises limit its usefulness when we try to resolve questions other than chronology. In this paper, we try to reconsider the essence of leixingxue and present another approach,which can be applied for more detailed statistical research. A case study from Zhongba, a salt production site with abundant ceramic sherds in the Three Gorges area, will be applied as an example of this new approach.

Changes and Distribution Patterns of House Forms During the Prehistoric Period in China

Tokudome, Daisuke
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In this essay, in order to clarify the emergence and context of the palace and ancestral shrine, which has been conceived as significant attributes of the early state, the author examines the changes and distribution patterns of house-forms and architectural remains during the prehistoric period in the He-nan region in China.

First, the author re-classified the houses/architectural remains by focusing on construction technique. Next, the author invesitigated regional differences.

The work revealed the timing of the emergence of the construction techniques used in the construction of palacial buildings. Furthermore, it was also revealed temporal changes in the function and structure of vernacular architecture which probably reflected changing social organization.

Decoration Analysis and Social Units: A Case Study of Fish-motifs on Yangshao Pottery

Hung, Ling-yu
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The fish-motif was one of the most typical designs on Yangshao painted pottery. It was used by Yangshao potters for at least one thousand years and was widely distributed in the Yellow River Valley and its surroundings. The symbolic meaning of fish to Yangshao people has been widely discussed by Chinese archaeologists since the 1960s. Most archaeologists agree that the fish-motif is an indicator of certain ethnic groups or archaeological cultures. However, various classification systems of fish and non-fish designs, which are related to contrary opinions about the division of archaeological cultures or social units, have been proposed. This paper will consider the motif structure, motif combinations, and the arrangement of designs on vessel shapes, to attempt to clarify the temporal and regional development of fish-motifs on Yangshao pottery. Furthermore, the nature of fish-motifs in Yangshao Culture will be discussed in terms of the identification of regularity and variation between areas in each phase.

Salt Production and Changjiang Region Lithics

Gwen P. Bennett
(Washington University in St. Louis)

Salt production in ancient China is presently a major research topic that has focused attention on many facets of this little understood aspect of the early economy. While specific forms of pottery, site layout, features, and other material culture patterns can often be associated with salt production, the relationship, if there is one, between salt production and lithics remains unclear. This paper will build upon the results of lithic analysis at Zhongba, Zhong County, Chongqing City, a location whose residents appear to have participated in the regional salt industry, to examine Neolithic and Bronze Age lithics in the Changjiang watershed in an attempt to establish an initial, contextualized understanding of their production (methods, forms, raw materials, production loci); implications for regional contact and exchange; and their roles in the regional ideological, sociopolitical, and economic structures, including the salt industry.

Stone Ornaments from the Bronze Age Sites of Yunnan: New Lights on Cultural Interactions Between Yunnan and Its Surrounding Regions

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The study appraises the popular theory which claims that lapidary production represented an indigenous craft specialization in ancient Yunnan. This hypothesis is inferred on the basis of an assemblage of stone body ornaments taken from burials of the Dian culture (c.350 B.C. - A.D. 100), in which bronzes were known as primary mortuary offerrings. Due to the lack of close parallels from available archaeological finds in China, these distinctive stone artifacts frequently are labeled as "local" products, despite the fact that concrete evidence pointing to the existence of stone jewelry workshops in the area has yet to be produced, and tha relevant mineral resources also need to be located to support this viewpoint. In light of current studies of typological features, technical aspects, and mineralogical data pertaining to idiosyncratic stone ornaments from sites in Yunnan and its surrounding regions, issues concerning the Dian finds can now be explained in the context of east Asian cultures. Current data reveal that the Yunnan stone artifacts were used exclusively by elitist groups as markers of social identity. These items consisted of both imported products in finished forms and items made of materials of unknown origins. A number of them clearly had emulated prototypes used at Neolithic burials in the Indochinese peninsula. These prototypes consisted of a variety of exotc marine shell jewelry, some of which subsequently became reproduced in stone, jade, and bronze materials. All of these artifacts proliferated for millennia at archaeological sites in China and southeast Asia. While a few of the stone replicas used in the Shang sphere and sites near the Yangzi River possibly were modified to suit local ritualistic functions, othersdiscovered at the Yunnan sites remained as faithful copies of southeast Asian jewelry, although the mechanism for their introduction into Yunnan has yet to be elucidated. A close examination of the Dian stone ornaments also adds new dimensions for studying Chinese lapidary traditions, in which falimiar stone artifact types usually are assumed to have evolved within China proper, while the transmission of the artistic and technological ideas embedded in these objects are thought to have diffused in east-to-west and north-to-south directions, but rarely vice versa. These existing views certainly need to be re-examined.

Copying with Changes: Patterns of Social and Cultural Diversification in Pre-imperial Sichuan(5th and 3rd Century B.C.)

Luisa-Elena Mengoni
(University College London)

This paper aims to investigate the changes in the social and cultural composition of selected communities in Sichuan between the 5th and the 3rd century BC, during the time of the Qin expansion in the region, as reflected in the mortuary remains dated to this period. The archaeological evidence from a number of sites in the Chengdu Plain shows a complex and highly mobile social landscape, where various social and cultural groups were closely interacting in the area, often redifining their respective identities and funerary practices. The discussion will concentrate on the chronological and typological variations identified in the mortuary remains of Shifang in the Chengdu Plain and in the cemeteries of Yingjing in south-westSichuan. These two examples show how the different cultural composition and social stratification of the individual communities shaped and affected the nature of their funerary practices, with the maintenance over time of a local group identity in Shifang and the emphasis on differentiating distinct social and cultural groups in Yingjing.

Early Seafaring and Exchange in Southeast China: New Evidence for the Austronesian Homeland

Barry Rolett
(University of Hawaii)

Early voyaging in Southeast China and across the Taiwan Strait is associated with the origins of the Austronesians, whose Lapita and Polynesian descendants were the best seafarers of their time. Recent research in both Southeast China and Polynesia shows that the geological sourcing of stone adzes is an effective method for reconstructing voyaging and interaction spheres. Centers for the mass production of high-quality adzes emerged in certain areas with abundant supplies of naturally-occurring fine-grained volcanic rock. The earliest known quarry and adze production center is in the Penghu Islands, in the Taiwan Strait. Beginning at least 4000 years ago, adzes made in Penghu were systematically transported to and distributed throughout the southwest coast of Taiwan. This tradition of early seafaring and exchange may represent a defining characteristic of the nascent Austronesian culture.

Inner and Outer Walls in Urban Development in China

Walburga Maria Wiesheu
(National School of Anthropology and History)

In this paper I try to discuss the function of walls in the process of urban transformation of China which took place in the period of transition from the Late Neolithic to the first state societies that rose in the Three Dynasties Period of the Bronze Age, out of an atmosphere of competitive interaction and intergroup conflict between the chiefdom entities of Longshan times.

An emphasis is placed here not only in outlining the mainly secular nature of the early fortified sites but also to analyse existing archaeological data in relation to the military hypothesis of urban origins which states that cities evolved as fortified centers or military strongholds around which the population agglutinated in search for defensive protection and against a background of intensifying conflict.

But as the presence of walls and other fortified elements seems not be a universal feature in all early centers, I prefer to consider them better as a sort of "palace-city" which served as the capital-sites of the earliest state societies. Moreover, as I have argued in several of my earlier papers, I hold that the original nucleus of the first cities formed the frequently protected inner walled core where the seats of state government were installed and elite compounds were segregated from the common population that lived outside the walled areas, so that actually the early urban settlements were much bigger in size.

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Session 2-C
Various Issues in Chinese Archaeology

Comparative Settlement Pattern Research on Early Chiefdom Communities in Eastern Inner Mongolia, the Northern Andes, and Mesoamerica

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(University of Pittsburgh)

No early chiefdom society was exactly like that of another region, but all represented the initial de-velopment of permanent hierarchical social relations in their respective regions. In these societies, those who would be chiefs were successful enough at forging unequal social relationships with other members of their own communities that the fundamental organizing principles of those communities were trans-formed. The communities involved in this transformation existed at varying social and spatial scales: we commonly think of small local communities composed of those in face-to-face interaction on a daily basis nested within higher order communities, which were sometimes nested within yet larger communities. From this perspective, theemergence of chiefdoms is marked by the emergence of larger, more tightly integrated communities than had existed previously. Settlement pattern research on a regional scale pro-vides an opportunity to delineate and compare these communities, based on theassumption that they are reflected in the way human settlement is distributed across the landscape at a given time. Compari-son of the settlement pattern records for the Chifeng, the Alto Magdalena (Colombia) and the Valley of Oaxaca (Mexico) shows that chiefdom communities emerged under conditions of especially low popula-tion density in Chifeng and Oaxaca, and their development was especially rapid in Oaxaca and the Alto Magdalena. It appears that interaction patterns were structured much more strongly around small local communities in Chifeng and Oaxaca than in the Alto Magdalena. It was also in Chifeng and Oaxaca that chiefdoms were succeeded eventually by large integrated state-level organization, whereas this did not occur in the Alto Magdalena sequence.

The Social Role of Eating in the Context of Shang Bronze Manufacturing

Minna Haapanen
(University of California, Los Angeles)

In the Late Shang period Anyang (ca. 1200-1046 BCE), food and many aspects relating to it (feasting, food sacrifices, food related ritual objects etc.) played crucial parts in the maintenance of power. All these contexts that scholars have thus far studied are related to the ritual use of food and not to its use in daily life. However, since food was of central concern to the Shang elite, I assume that it played a crucial role for other social classes as well. Especially I assume this to be the case for specialized bronze manufacturers who were intimately connected to the food and drink centred ceremonial life of the Shang elite. After all, they manufactured the needed bronze ritual vessels used in sacrifices and most likely also in related feasts. This paper thus examines this possible usage of food and foodways in the building, maintenance, and negotiation of power and identity among specialized bronze manufacturers of the Shang dynasty with the focus on Miaopu Locus North, Anyang, Henan Province, China. This based on my doctoral work on whole and reconstructed ceramics from this site. My analysis of the vessels focuses on their shape and size as well as on use-wear present on them. Based on this analysis, I propose that as food and drink were important in the claim for power among the ruling elite, they were also intentionally used in this discourse of power among the lower echelons of the Shang society.

Human Sacrifice of the Mid-Shang Dynasty

Song, Guoding
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Human Sacrifice plays a very important role in the ritual activities through ancient time to recent society. The earliest phenomenon of using human being as sacrifice was found in the Longshan Culture period. During Shang Dynasty, the practice of using human sacrifices was recorded in the Oracle Bone Inscriptions. Many human beings were used as offerings and in very brutal manner. This phenomenon is proved by the more and more archaeological finds. Comparing the archaeological finds from Zhengzhou Shang City, Xiaoshuangqiao Shang Site, and Anyang Yin Ruin in Henan Province; Gaocheng Taixi Shang Site in Hebei and Panlongcheng city in Hubei, we had better understanding about the special ritual activities by using human sacrifices in Mid-Shang period. This kind of social phenomena can be classified as immolated slaves and funeral murders, for the people as sacrifices came from different resources and used for different purposes.

The human beings were killed for the purpose of ritual activities, to worship theirancestors to beg for the lucky year or even for rain, or celebrate victories etc. The human sacrifices almost all came from the captures of war, perhaps only small partial were the present from its colony tribes. Funeral murder means when the noble died, his wife, concubines or even his servants were killed according to their own wishes to be buried together with him.

The human sacrifice remains in Mid-Shang are relatively less than those in Late-Shang phase, but they have distinguished characters. They were mostly found within or near the foundations of buildings, such as the human sacrifice remains near the palatial area in Xiaoshuangqiao Site, including the mass sacrificial burials, joint burial tombs, single person burials, the burials in the ruin pitsetc. The Baijiazhuang period of Zhengzhou Shang City belongs to mid-Shang, in which many human sacrifice remains were found, such as about a hundred human skulls with cutting signs excavated in the ditch of Shang palatial area. The earliest tomb with funeral murder was also found in Zhengzhou Shang City. One human sacrifice was found in it. In Gaocheng Taixi cemetery, human sacrifices were found in the second platform of the tomb, probably the servants or the concubine of the tomb owner. In one tomb of Panlongcheng City, three human skeletons as funeral murders were found, one is an adult with some burial objects; and one is a child, found underneath the adult; the other one was buried in front of the coffin. According to the archaeological finds, the phenomena of the human sacrifices used in Mid-Shang period could be classified as: 1. The usage of human as sacrifices to consecrate for laying of the building foundation. 2. The ritual activity by using human sacrifices near their ancestral temples and palaces. 3.

The human sacrifices in tomb including funeral murder and mass burial pits. 4. The human sacrifice used in community area, suburb and mountain areas for special ritual activities.

Mode of the Wucheng Community's Economic Connection with the Shang Metropolitan Centers

Zhang, Liangren
(University of California, Los Angeles)

The 1989 discovery of the Dayangzhou tomb in the Jiangxi Province marked a sensational moment in Shang archaeology. This tomb, corresponding to the early Anyang period, is furnished with an extraordinarily rich deposit of luxury objects outside the Shang metropolitan centers. This substantial corpus of new material revived an age-long discourse over Bronze Age cultures in South China, and this renewed discussion arrived at two mainstream opinions. Firstly, there existed an advanced local bronze industry in south China; and secondly, the local elite played a peripheral role in the Shang world systemsupplying raw materials to the Shang urban centers. While these opinions represent a significant progress of scholarship, they are problematic. My own analysis of this new material as well as earlier discoveries at the Wucheng settlement, a regional center to which the occupant of the Dayangzhou tomb must have belonged, produces very different results.

The most prominent finds of the Dayangzhou tomb were the 48 bronze vessels. These vessels display a broad array of distinctive stylistic features, despite that they follow Shang prototypes in both forms and motifs. These features led many scholars, who had long argued for an advanced indigenous bronze industry and civilization in south China based on stray finds, to believe that their opinion has now gained a firm ground. But the fact that little ceramic molds but stone moldsincapable to produce vesselshave been discovered at Wucheng undermines this hypothesis. Considering that this settlement has been excavated to a great extent, I am inclined towards another hypothesis that these bronze vessels were imports, more accurately, ordered products from foundries in the Shang metropolitan centers in the north.

While this hypothesis sounds odd to many scholars, it is quite possible within the politico-economic context of the time. It has been long believed that the Wucheng community, situated in a region rich of copper ore, supplied this mineral to the prestige goods production in the Shang urban centers. There is evidence further indicating that this community traded another locally available raw material, gaoling clay. It is for this reason that many studies have ascribed a peripheral role to the Wucheng site in relation to the Shang urban centers. Such account, however, simplified the politico-economic connection. My study discloses that originally the community came into being as a colony of the Shang kingdom, carrying the mission of exploiting the gaolin clay and copper ore on behalf

of prestige goods production in the motherland. In return, the Shang colonizers, who sought to perpetuate the ritual life of their mother culture, imported bronze vessels from foundries in their motherland, since they did not have capacity to produce them; they ordered bronze vessels from the Shang foundries, and had them produced to their own tastes. Thus the Wucheng elite did not simply act as a raw material supplier, but also attempted tolive their own political and religious life. Over time the Wucheng community became independent culturally, and probably politically as well, from the Shang kingdom; while the elite continued to supply raw materials and to order bronze vessels, they developed a divergent aesthetic appetite of the vessels.

Houses with Courtyard(Siheyuan) at Yinxu

Meng, Xianwu & Li, Guichang
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The fieldwork of the last century discovered dozens of house remains at Yinxu, the last capital of the Shang dynasty of China, demonstrating that the houses built on the rammed earth platform were one of the important constructions of the Shangy era. This paper presents the latest discoveries of the rammed earth foundations at Yinxu and discusses the functions of these constructios.

The latest house foundations are discovered at the north locus of Beixujiaqiao village, south Yinxu. They appear in two types of structures. Type A is in the shape of traditional Chinese constructions Siheyuan, or compound with houses around a courtyard. Type B may be termed as 'Weiwu', or quadrangle building. The characteristics of their structure suggest that they are not built for the commoners. We argue that they may be used as the administration buildings of the Shang officers or the chiefs of the Shang clans.

Bronzes from Xin'gan: Local Response to the Cultural and Political Expansion of the Shang

Sun, Yan
(Gettysburg College)

The late second millennium BCE witnessed the emergence of several regional powers. The Shang centered at the Central Plain was only one of these who had the earliest known history. Beyond this dynastic center, one of the powerful contemporaries of the Shang was found at the Gan River valley in the south named as the Wucheng Culture (ca. 1500 - 1200 BCE). Bronzes from Xin'gan of the Wucheng culture were dominated by Shang style or Shang inspired design. Nevertheless, distinctive local style was also presented on bronzes that owe little or nothing to the Shang.

How and why the Wucheng culture accepted or rejected certain Shang styles from the Central Plain, how this phenomenon was affected by local cultural traditions and social organization, and what roles the Shang and the Wucheng played in the dynamics of their interactions will be the focus of the discussion.

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Daxinzhuang Site and Shang Culture in Eastern China

Fang, Hui
(Shandong University)

Daxinzhuang Site, located in Jinan City, Shandong Province, is a well-known site. In the Spring of 2003, a full-coverage survey and an large scale excavation were carried out by Shandong University. Many new discoveries were made including inscribed oracle bones, high level burials with presitage goods like bronze, jade, sea shell etc.. It's clearly that the Daxinzhuang is a regional center in Eastern China in Shang period, which linked Shandong and Central Plain. The paper talks about the settlement pattern changes and why Daxinzhuang became a regional center in Middle Shang period.

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Session 3-A
Current Researches in Shang Archaeology

Becoming Shang: The Perspective from Animal Bones at Daxinzhuang

Li, Min
(University of Michigan)

Animals constituted an important link between humans and the spiritual, cultural and natural world. Changes in the conception of this relationship can be indicative of social transformations. This paper investigates the effect and manifestation of colonization and acculturation at Daxinzhuang, an important Shang settlement in eastern China, through a preliminary analysis of animal bones from diverse archaeological contexts. By exploring a region on the margin of impinging state power and approaching faunal remains representing a broad range of social interactions, this study will contribute to a comprehensive understanding on the process of "becoming Shang"in the late 2nd millennium B.C.

Southern Influence in the Northern Zone: Evidence from Bronze Vessels of the Anyang Period

Xu, Jay
(The Art Institute of Chicago)

The Northern Zone of China has long been recognized as a crossroads penetrated by different Bronze Age cultures of north Asia. In studying the dynamics of cultural interaction in this region and its development as a distinctive cultural entity, close attention has been paid to the region's relationship with the Central Plain, Central Asia, and South Siberia. The Shang civilization of the Anyang period (c. 12001000 BC) figures largely in this network of cultural connections. A large number of bronze vessels of this period have been unearthed in the loess plateau along the banks of the Yellow River in Shanxi and Shaanxi. They are routinely characterized as products of the Shang culture or, for those with unusual stylistic features, as local variations of the Shang prototypes.

The present study addresses the possible existence of a southern connection in the Northern Zone. In the first part of the paper, the author discerns and describes in detail a number of bronze vessels among those found in Shanxi and Shaanxi that bear stylistic features identifiable as characteristic of bronzes from the middle Changjiang region in south China. This body of evidence argues for a southern influence in the Northern Zone and a network of cultural communications that is wider than previously thought. In the second part, the author discusses likely routes by which cultural influence or actual goods between these two regions may have traveled.

The identification of a group of bronzesoriginating in the middle Changjiang region among the so-called Shang or Shang-inspired bronzes encourages an adjustment in our view of the relationship between the Northern Zone and the Shang civilization as well as the relative position of the Shang in the cultural geography of early Bronze Age China. These two issues are discussed briefly in the third part of the paper.

Tsushima in the Focus of Cross-cultural Relations

Tawara, Kanji
(Tsushima Museum of History and Folklore)

Archaeology in Korea and Japan today, at the beginning of the 21st century, is manifold. Dynamic interactions between institutions and scholars of both countries resulted in many conferences and studies in the last few decades. However, the archaeological research of the respective nations still tend to publish their results only in their specific national languages, and thus contribute to the separation of what should be treated within a mono-political discourse of cultural developments.

Moreover, the history of the last ca. two hundred years determined archaeological approaches, as becomes obvious when looking at the racism and the romantic ideals of earlier Japanese archaeology, which leant heavily on the imperialistic models of 19th and early 20th century Europe. The Japanese archaeology after World War II rejected such colonial attitudes. However, today once again approaches comparable to these ideas seem to appear in the archaeological understanding, emphasizing national or even local issues and meanings. In consequence, - as Tsushima Island is located in the middle of the Straits that separates Korea and Japan -, Tsushima Island is also positioned outside, or, depending on the specific research perspective, at the outer edge of the archaeological discourse of the two nations.

However, the results of archaeological excavations, the material evidence, such as bronzes and ceramics, and the situation of the sites actually show how much closer the relationship between Korea and Japan had been in prehistoric and early historic ages, in comparison to the modern world systems. With this paper, I will try to introduce the basic theme of this panel comprising the history and social environment of Tsushima Island within the Straits.

Yayoi Dating: Across the North-eastern Asia

Shoda, Sinya
(Chungnam National University)

In this report I discuss about the date of the starting of Yayoi period, which is considered to be the beginning of a class society. Last year, the survey team in National museum of Japanese history announced that it dates back to B.C.10th century. But by cross-dating of bronze wares which had been inscribed calendar years used in the Zhou dynasty and bronze daggers in the surrounding area, it cannot be taken for granted and we have to reconsider it between B.C.8th and B.C.6th century.

The date of the beginning of Yayoi period corresponds to the Zhou dynasty in the Central Plains of China. There are some calendar years inscribed on the bronze wares. Thanks to them, directly can we research the date of these kinds of bronze wares, without depending on the C14 dating.

In the southern part of Korean peninsula, there are some tombs that have the "Liaoning-type" bronze dagger, which is mainly distributed in the Liaoning province in China. In Liaoning province, they are sometimes excavated with the bronze ware, which is the same type as a calendar-inscribed ware, so we can know the date of the dagger itself.

On the other hand, in the southern part of Korean peninsula, they are sometimes excavated with the local potteries or stone tools. So in the end we can reveal the date of these local artifacts and their archaeological culture. Birae-dong site dolmen no.1, excavated by the Chung-nam national university museum, is the oldest among those tombs. Other artifacts excavated together belong to phase IIB to III(according to my chronological study), in Japan it is the Final Jomon. On the other hand, at Songguk-ri site tomb no.1, excavated by national museum in 1974, they found the Liaoning bronze dagger and its reprocessing chisel with a stone dagger and arrowheads. These stone weapons belong to phase V-VI. In Japan it is the former part of the Early Yayoi. The Initial Yayoi, which is the first phase of Yayoi period, corresponds with phase IV-V, just between Birae-dong and Songguk-ri.

In east-northern China, we can determine an upper limit of Liaoning bronze dagger by the artifacts of Nanshangen M101 and Xiaoheishigou M8501. Meanwhile, we can find the lower limit in Zhengjiawazi M6512. So, the period of time is from B.C.9th to B.C.6th century.

So, now I can conclude that the period of time from phase IIB to VI is roughly from B.C.9th century to B.C.6th century. It just means that the starting time of Yayoi period cannot go up to more than B.C.9th century at least, and by considering time-lag between phase IIB and IV, it becomes later. In any case, it is far from "B.C.10th".

AMS dating was also applied to Birae-dong dolmen no.1 and the result was 1,145-900B.C. As

above mentioned, Liaoning bronze dagger continued from B.C.9th to B.C.6th century. But this dating tells that in Korean peninsula it existed between B.C.12th and B.C.10th century. Obviously it is contradiction, and cannot be agreed with. Dating of the bronze age in Korean peninsula and Yayoi period in Japan need to be done not by depending on the AMS, but by the cross-dating of archaeological artifacts. That is also very advisable way to connect the illiterate world to the Central Plains, which has written history of 1st millennium B.C.

The Relation of the Korean Peninsula and the Japanese Islands in the Proto-three Kingdoms Period

Nagamoto, Tomoko
(Otemae University)

The Proto-Three Kingdoms Period is early about parallel to the time from the mid of the Middle to the Late Yayoi period. The exchange between the Korean Peninsula and the Japanese islands of that time is attested by the import of iron artifacts and materials for iron or acquisition of bronze material. Although the conclusion of the argument on domestic source of iron has no come to a conclusion, it is hard to think that there was no import of materials at all. Rather it is presumed that the materials are imported from overseas to some extent. Ironware distributed from Kyushu to Kanto, is considered to have been transported as materials or products from the Korean Peninsula directly or indirectly, and we can trace a exchange with the Korean Peninsula. It is emphasized that iron materials or products were imported through Kyushu on the basis that Iron artifacts founded in Kyusyu are superb. But it is possible that the coastal area of the Sea of Japan had means of direct exchange with the Korean Peninsula. This possibility is represented in the following sites where a large amount of iron artifacts are found. Kyoto Naguoka site in the later part of the Middle Yayoi period, the Tottori Aoyakamijithi site, the Shimane Mukibanda site, the Ueno II site and the Hukushuma Hayashi-Hujishuma site in the Late Yayoi period.

Bronze ware was imported as products in the later part of Early Yayoi period and after then, was transported as materials. Types were varied from region to region, so bronze objects seem to be manufactured in each region. Taking account of the situation of iron import, it is difficult to say that bronze materials and products were imported only through Kyushu. It is necessary to think that the information and the materials were imported through the coastal area of the Sea of Japan as well. As noted above, the relationship between the Korean Peninsula and the Japanese Islands has been argued focusing on metal objects mainly. Can't the trace, be found in the commodities? If the exchange of the commodities is recognized, we can consider that the daily relationship and frequent exchange of information were also achieved. Therefore, I intend to consider the relationship between the Korean Peninsula and the Japanese Islands by focusing on the pottery. I will discuss the relationship by dealing with the short-necked jar, their form composition and handl. The bottom of the pottery changed to rounded-shape in the terminal stage of Yayoi period. It is said that this change was not asimple change of pottery form but had relation to the way of boiling use. The rounded-bottm pot such as Shounai type pot,

Kibi type pot and Sanin type pot, were elaborately manufactured, has regional characters and transported to a distant region. All these aspects show that the movement of the rounded-bottom pot differs from the previous pottery. Some scholars regard this pottery from as a more specialized product. The rounded-bottom pottery was absent in the previous period in the Japanese Islands. So, I would examine the influence of the Korean Peninsula.

The Wei-chih Tung-i-chuan as a Source for the Perception of the Metal Age Cultures in the Korean Straits Region

Barbara Seyock
(University of Munich)

In historical or archaeological sciences the differentiation between historic and prehistoric periods commonly relates to the existence or non-existence of the art of writing. History, in this sense, is considered as the study of the past making use of written records, documents or inscriptions, while archaeology focuses on the material evidence of early cultures. There are, of course, points of contact between history and archaeology, i.e. when the results of archaeological excavations and explanations contribute to the understanding of fully historic periods, such as the archaeology of the middle ages does, or the relatively new field of industrial archaeology.

Another point of contact concerns the contrary situationof a fully prehistoric period in a given cultural region with historical material existing outside the culture in question. It is in this case that we speak of a proto-historical culture, a culture with no indigenous script nor otherwise written accounts, but with outside observers who already had accomplished a tradition of historical records and who took an interest in recording what was going on beyond their own political-cultural sphere.

For East Asia, at the beginning of the Christian era, it is the culture of the Chinese mainland that maintained the position of an advanced civilization. Accordingly the first comprehensive written report on the cultures living on the Korean peninsula and the Japanese archipelago originates from one of the early Chinese standard histories, the Wei-chih 魏志 as part of the San-kuo-chih 三國志 , written in the late 3rd century AD. The report on the so-called "Eastern barbarians", the Tung-i-chuan 東夷傳, was composed as a sort of foreign relations handbook, 'written by bureaucrats attached to the central government and for the use of such bureaucrats" (Dubs 1946: 31). It describes the history, culture and activities of the different barbarian peoples such as the Han 韓 in the Korean south and the Wa 倭 on the Japanese islands.

From an archaeological perspective the early centuries AD in the Korean Straits region are characterized by some remarkable new features that initiated societies based on increasing social stratification and political self-awareness. Owing to the establishment of four Chinese commanderies in the North of the Korean peninsula in the year 108 BC the technique of bronze and iron production spread to the Korean south coast and crossed the Straits. Chinese goods such as bronze mirrors and

horse-and-carriage equipment were imported from Han as well as Wa communities. New ceramic traditions appeared, and some specific burial forms such as the jar burial or the burial precinct were in use on both sides of the Straits. In the Korean south east some richly furnished burials illustrate the influx of formerly scythic elements into the culture of the Proto-Three Kingdom period, or the late iron age respectively, and in the north of Kysh(Japan) archaeological excavations revealed a strong cluster of Yayoi period burial sites, settlements and workshops. Locally produced goods seem to have been extensively traded.

This paper tries to illuminate how the information of the historic report on the Eastern Barbarians contributes to the understanding of the early cultures aroundthe Korean Straits, and how the historical account supplies us with additional explanatory approaches.

Relationship in Ritual of Funeral Between Japan and Korea

Nakamura, Daisuke
(Osaka University)

In East Asia including the Zhongyuan area, devoting pottery as grave goods is widely seen. In these places, grave goods were put in the burial pit or coffin. Among them, in the whole Korean Peninsula and the Liaodong area, small jars were used as grave goods conspicuously in about BC.1000.

We call this period the Mumon-pottery culture in the South Korean Peninsula. In Japan, the Jomon culture transferred into the Yayoi culture under the influence of Mumon-pottery culture. Although the customs as grave goods using small jars were also received in the Yayoi culture, most of the small jars were put 'on'burial pit in the earliest stage of it. However, from early stage of the Yayoi period, as well as in the Korean Peninsula, the ritual of putting small jars 'in' the coffin or the burial pit comes to be seen widely.

In Japan, many elements of the Mumon-pottery culture; the pottery style, stone implement composition, dolmens, and wooden coffin, etc. were received straightly from the earliest stage of Yayoi period. Under this situation, the difference is shown in the ritual act of funeral at the beginning. In what does this phenomenon originate?

The Jomon culture of western and eastern part of Japan shows a considerably different development. In the western Jomon culture, it is very rare for the dead to possess something other than accessories. And there, the position on which pottery is put has changed from the inner of burial pit to the outer of burial pit, before Yayoi culture formed.

It has become clear that the Yayoi culture has received not only material culture, but also ideology from the Korean Peninsula. Despite such situation, the details of custom have not become the same style by traditional custom of the Jomon culture. Namely in spite of having received the form of pottery and using it at graves, the way of a ritual act haven't result in the same style as the Mumon-pottery culture.

Various acts in a grave reflect most strongly the religious idea including the attitude against the dead. Whether putting pottery in or out of the burial pit may be not so important. But, we should not treat it briefly, because it reflects the religious idea.

After the Early stage of the Yayoi period, the Yayoi culture gradually close to that of the Korean Peninsula in mortuary practices such as the grave goods including bronze implements and the ritual act in the grave. Taking such transitions in the grave of Yayoi culture into consideration, the

difference in the funerary act of the earliest time will be important as what shows the differences between the fundamental culture of Japan and Korea at that time.

A Study of the Distribution of Korean Ceramic: Based on the Analysis of Celadon Ware During the Medieval Period of Japan-

Furiya, Tetsuo
(Kyushu University)

This paper is an examination of the distribution of Korean Trade Ceramic, especially Celadon Ware during the Medieval Period of Japan. In the same time, I try to explain how the people who lived in the Medieval Japan used or consumed the Korean Trade Ceramics. The artifact from a certain archaeological site reflected to a certain archaeological context on which we can prove how the findings were used. To clarify these problems, I re-classified the materials of Celadon Ware from archaeological sites of Japan, and made a new system of chronology between the Medieval Period of Japan and Koryo Period of Korea. A result of this chronology is; Period Ⅰ about the late-11to early-12 centuries; Period Ⅱ about early-12 to mid-13 centuries; Period Ⅲ about late-13 to mid-14 centuries; Period Ⅳ about late-14 to late 15 centuries. Through the formation of the distribution during Period Ⅰ-Ⅳ, it is clear that about 60 percentages of Korean ceramics are found in a variety of political center, such as Castles (JOU-KAN), Offices (KOKUFU), Temples (JI-IN). In Period Ⅰ, there is a tendency that most of Korean Ceramics distributes around the northern KYUSHU. Period Ⅱ, the distribution of Kyushu sudden decreases, on the contrary, two cities of HEIAN (HEIAN-KYO) and KAMAKURA comes to be prominent. Period Ⅲ, the KAMAKURA is a center of the distribution with some sites depended on the Polity of KAMAKURA (BAKUFU). Period Ⅳ, there is a tendency that distribution revised in the northern KYUSHU, and itspread around a whole area of Japan. In conclusion, I will point out the latter understandings about the distribution routs- of Korean Ceramics in the Medieval of Japan. (1) The rout along the SETOUTI Sea and the Pacific Ocean (2) The rout along the NIHON Sea (3) The rout through inland of Japan.

Yayoi in the East Asian Interaction Sphere: Introduction and Background

Ikawa-Smith, Fumiko
(McGill University)

Yayoi Culture is thought to represent the first archaeological culture that is 'recognizably Japanese.' The society appears to have been based on rice cultivation in irrigated fields, that were worked with the kinds of agricultural implements not unlike those used in recent past. The settlements included storage houses on stiles with features similar to those found in Shinto shrines, and the apparent ceremonial significance placed on mirrors, swords and beads reminds us of the 'Three Imperial Regalia'symbolizing political legitimacy. When and how this culture took its shape, not to mention where the various component elements came from, is of great import to construction of Japanese history, and Japanese identity. These questions are also important in situating Japan among the peoples and the nations of eastern Asia.

The announcement at the 69th Meeting of the Japanese Archaeological Association by the team of researchers from the National Museum of Japanese History in May 2003 that the calibrated AMS radiocarbon dates on Initial Yayoi pottery from several sites in northern Kyushu indicated the beginning of the Yayoi Period to be some 500 years earlier than had been generally accepted created a sensation. The hall where the announcement was made was packed with archaeologists and journalists, and the ensuing debate continues to be widely reported through mass media.

Critical comments on the dates are presented on several grounds, for example:

1. Some archaeologists dismiss outright the validity and reliability of radiocarbon dates. Somewhat surprising for a country renowned for high-technology products, there is a deep-rooted reluctance among Japanese archaeologists to use 'non-archaeological' dating methods. The sentiment that such methods threaten the integrity of the archaeological discipline goes back to the controversy in the 1960s over the surprisingly early radiocarbon dates on Jomon pottery.

2. Other archaeologists raise objection on the ground that the AMS dates are at variance with the chronology based on local archaeological evidence, such as the chronology constructed from the typological sequence of burial jars combined with the estimated ages of skeletal remains contained within.

3. The third group of critics refers to the discrepancy between the AMS dates and the chronology based on objects of continental origins, such as bronze mirrors with inscribed dates, and the evidence for wide-spread use of cast iron implements.

It may be that ' Yayoi Culture did not come from anywhere. It was formed in the archipelago through combination of elements newly derived from the continent with those which had existed in Jomon times'(Sahara Makoto, A New History of Japan, Vol. I, p. 303, 1987). Nevertheless, it was the addition of those external elements that was essential in creating something 'recognizably Japanese,' and when these elements actually arrived in the archipelago is now at issue. The international forum provided by the Society for East Asian Archaeology seems to me to be the ideal place to sort out the discrepancy between the AMS dates and the ages attributed to the artifacts of continental derivation. I look forward to a lively exchange of views, among the panellists and from the participants at large.

AMS Radiocarbon Dating for the Beginning of the Yayoi Period in Japan

Fujio, Shinichiro & Sakamoto, Minoru
(National Museum of Japanese History)

Samples of carbonised material adhering to pottery sherds of the Initial Yayoi Period were dated by the radiocarbon method using the Accelerator Mass Spectrometry. The sherds were recovered from several archaeological sites in northern Kyushu that represent the very early stage of wet-rice agriculture in the Japanese archipelago. The results were then converted to calendar years according to the calibration curve of INTCAL98. The dates cluster around 800-900 B.C. , suggesting that the Yayoi Period began in the 10th century B.C., rather than in the 5th century, some 500 years earlier than had been generally accepted.

Comparison of these dates with age estimates provided by dendrochronology, artifacts with date inscriptions, and correlations of local ceramic sequences leads us to conclude that the newly obtained AMS dates for the Initial Yayoi are consistent with age estimates derived from other methods. We therefore believe that the early dates are supportable on archaeological grounds as well.

The findings suggest the following:

1. It is possible that the start of rice-cultivation in irrigated field in the Japanese archipelago corresponded in time to the Shang-Western Zhou period of the continental chronology, rather than the Eastern Zhou (or the Spring-and-Autumn and the Warring States) period;

2. It had been thought that the practice of rice cultivation in irrigation fields in the Japanese archipelago was associated with the use of iron tools from the beginning, but is now seems likely that it began with the stone age technology without iron tools;

3. According to the previous chronological framework, the rate of sociao-political transformation in the Japanese archipelago was unusually rapid, with the incipient states, termed kuni, appearing within 400 years of the establishment of the agricultural way of life. It now appears that the process took place at a much slower pace, taking almost twice as long as had been suggested.

Some Problems with the Outcome of the A.M.S. Dating of the Yayoi Period by the National Museum of Japan

Takakura, Hiroaki & Mizoguchi, Koji
(Seinan Gakuin University & Kyushu University)

The outcome of the A.M.S. dating project by the National Museum of Japanese History, particularly its finding of the beginning of the Yayoi period being as much as 500 years older than the widely accepted date, is stirring controversy in Japan. The fact that the dates produced do not significantly deviate suggests that they are probably ?right?as far as the natural scientific methods used and procedure taken are concerned. However, that does not necessarily prove the validity of the dates as that for such a historical episode as the beginning of the Yayoi period, particularly concerning that they significantly contradict the dates deriving from the chronology constructed by archaeological materials accurately datable from Chinese historical documents. Difference between the archaeolo-historical absolute chronology and the A.M.S. dates is particularly significant in 1) the beginning of the production of forgeable cast iron items, 2) the beginning of the construction of tumuli (that in Japanese archipelago would turn out to be 500 years earlier than China if we accepted the A.M.S. dates), and 3) the dates for Han bronze mirrors (should we accept the A.M.S. dates, Late Han mirrors would turn out to have been produced in the Early Han period and Early Han mirrors produced in the Warring states period). The A.M.S. dates also wildly contradict the duration of jar burial cemeteries of the northern Kyushu region calculated from the relative chronology of burial jars and the age estimation of skeletal remains. Concerning the above, the validity of the A.M.S. dates can be subject to examination only after the above mentioned discrepancies are solved. In that regard, the outcome of the A.M.S. dating project by the National Museum of Japanese History should be treated as a new piece of information for the construction of the absolute chronology of the Yayoi period.

Gendered Archaeology and the Question of Power in East Asia

Sarah M. Nelson
(University of Denver)

The topic of gender has been slow to develop in East Asia, but some recent projects demonstrate the possibilities for our region. This paper reviews the new developments, and ties the locus of power in archaeology to the understanding of gender and power in the past.

Gender Archaeology of China

Namba, Junko
(Tenri University)

The study on women's history in China is just opening the door. The main studies are going from the Literary, Ethnological or Philosophical approach, and Archaeological approach focusing on gender is backward.

From the overview on the women's history in China, it is pointed out that the influence of Confucianism(儒教) is very strong on women's state, and this is also seen in the eastern Asian world. Although the thought of Confucianism was always changing as the period, however the thought was established in the mood of society of Spring and Autumn Period, and I think it is very important to study on the society of Shang to Zhou Dynasties, and the archaeological approach will provide much on that study.

Why Gender Archaeology is not Popular in Japan?

Matsumoto, Nakao
(Okayama University)

Gender archaeology remains quite minor in Japanese archaeology while it has attained a popular position in many European and American countries since its advocacy in 1980s. This paper examines the reasons why gendered perspective does not become popular in Japanese archaeology from a number of angles: social factors, academic situations, and archaeological contexts. In Japan, women's history has a long and strong tradition, and women have been rather visible in prehistory, too. It has been recognized that patriarchy did not pervade in every aspect of Japanese society for a long time and bilateral system partly persisted well into the early Modern era. In spite of the academic tradition and rich archaeological material, recent theoretical and conceptual developments in gender archaeology has not been well adopted in Japan. The author points out that we should examine particular historical contexts concerning the relationship between politics and historical discourses in Japan to understand the stagnation of gender archaeology.

Anthropomorphic Clay Figurines in the Prehistoric Japanese Archipelago: Ideological and Gendered Perspective

Iwasaki, Kumi
(Okayama University)

The Jomon period, which extends over 10,000 years,has been considered as a magic or ritual oriented culture because of the many artifacts considered to have been used for ritual. Especially redundant are clay figurines, about 15000 of which have been found,are verified from the Intial Jomon period to the early Yayoi period, and, the further increase in the futureis quite likely then. Their proportion is also very rich in variety suggesting the rich imaginative power of people of those days. The Jomon clay figurines are uniquely large in quantity compared with other parts of the world. It has been considered that many of figurines represent the female image. Because of their unrealistic style, they have been interpreted as the goddesses and mother goddesses rather than real women. These interpretations assume only one role of clay figurines, which is not likely considering the very long time of 10,000 years. We should pay more attention to particular contexts and deviations to attain more adequate interpretation of the figurines. Although the body features of clay figurines have been used to reconstruct the customs of Jomon period, they are examined from the ideological perspective in this paper. This paper focuses on the second half of the late Jomon period, when the amount of clay figurines increase remarkably in central and northern part of Kyushu. There are two explanations for this phenomenon: 1) The figurines spread to Kyushu as a part of cultural complexes from eastern Japan, and 2) ritual with clay figurines were performed extensively against the new culture transmitted from the continent. This paper presents a new interpretation of the increase of figurines from a gendered perspective, considering the women's roles in horticultural society.

Roles of Women in Nihonshoki

Gina L. Barnes & Kaneko Masumi
(University of Durham)

The 8th-century court history, the Nihon Shoki, is rich in historical and anecdotal data covering the preceding several centuries during Japanese state formation. This paper analyzes the mention of women in different contexts within the imperial chapters of the Nihon Shoki for insights into their different functional and social roles. Results show that seven major roles can be identified: women as mates, mothers, mystics, militarists, maids, manufacturers & monarchs. Whether or not these are historically accurate records, they at least indicate that the 8th-century courtiers were willing to accept these dipictions of women in these various roles as part of their own heritage. The Japanese information is put into the wider perspective of gender theory in evaluating the significance of these roles for state formation.

The Japanese Islands from Fifteen to Half a Million Years Ago: Implications for Archaeology

Gina L. Barnes
(University of Durham)

Following Barnes 2003, the geological processes of the formation of the modern Japanese landscape will be traced between 15 and 0.5 Ma. These include uplift and erosion, basin formation, and the beginnings of Quaternary volcanics and fault activity. These processes determined the landscape which the first occupants of the archipelago entered and such processes continually modified the land surface upon which they lived. The geological longue dure is the necessary framework for studying the Quaternary: understanding the long-term transformations of the landscape and taphonomy of the human remains within it allows prediction of the nature of the archaeological record at any point in Quaternary time. Barnes, G.L. (2003) "Origins of the Japanese Islands: the new 'big picture'". Nichibunken Japan Review 15: 3-5

New Direction in the Archaeology of Human Body in Japan and Its Application to the Social Body in the Kofun Period

Mitsumoto, Jun
(Okayama University)

While archaeological studies of the human body have been discussed actively in Europe and America, some Japanese scholars have also started to focus on the ancient human body recently. This paper aims to show the outline of the current trend in the Japanese archaeology of the body and my practical analysis of the social body in the Kofun period. Japanese approaches to the social body include four viewpoints: cognitive archaeology, bodily operation, body image and symbolism, and critical analysis of our own body. Human body, however, is still often treated as simply a natural object in Japanese archaeology, which I consider is the problem with the classical thought which regards the body as natural under the false premise of universal humanness through the history. I propose an alternative approach to the body as being historically constructed by both universal and distinctive factors. This perspective enables us to understand particular human images in the past, and to obtain deeper understanding of the society and the culture from the reconstructed body and human images.

After examining the research trend in Japanese archaeology, I analyze the body images in the Kofun period from the viewpoint of symbolism and cognition to discuss how the body was constructed historically. Analysis of the placement of burial goods in tumuli reveals that valued parts of the body changed through the Kofun period: from the concentration of burial goods around the head in the early stageto the distribution of them to each part of the body such as the arms, waist, and legs in the later stage. This change also means the change of the relation between the objects and the body. I consider that cognitive archaeology offers an important framework for interpreting this phenomenon. Considering that human cognitive structure is based on the bodily experience, I argue that the change in their image of the body was related to their image of the world such as social hierarchy and how to symbolize the dead.

World System Incorporation and the Okhotsk Culture of Hokkaido

Mark Hudson
(Hokkaido University)

This paper considers the interplay between human adaptation and political economy in the context of the Okhotsk culture of Hokkaido (c. 550-1200 C.E.). Although it flourished at a time of great change and expansion in the East Asian world system, it is argued that the Okhotsk managed to resist incorporation by that system until its final stages. The resistance to world system domination shown by the Okhotsk people, however, does not mean that they were isolated from macroregional developments. The biocultural reproduction of Okhotsk society cannot be understood only in terms of ecological adaptation but must be placed in the context of the Northeast Asian political economy.

Fragmentation and Identity Politics: Hyper Capitalism and Archaeological Discursive Formation

Mizoguchi, Koji
(Kyushu University)

This paper attempts to illustrate the parallelism between the "post-processual attitude" in archaeology and the operation of the hyper-capitalist economy and to suggest a way to cope with this vicious interdependence. Post-processual archaeologies can be characterized as a "negative paradigm", the paradigm based upon the epistemological stance that the knowledge that no unified knowledge of the world is possible is the only knowledge which is sustainable. The "deconstruction" of belief in the unified knowledge of the world has resulted in the destruction of a discursive space for critical and constructive dialogue. A majority of practitioners of post-processual archaeologies would argue that what they are after is quite the contrary; opening up an increasing number of discursive spaces for freer, critical dialogue. However what we are actually witnessing appears to be the creation of mutually segregated discursive spaces/fields, or "miniature paradigms", which do not communicate with one another. The paper argues that the proliferation of post-processual miniature-paradigms is an expression of the deepening of the social trend driven by the hyper-capitalistic social formation which reproduces itself by continuously creating differences and relativising everything as quickly as possible, and suggests that the intentional creation of a public discursive domain in which archaeologists are obliged to not only tolerate but also continue to discuss about each other's differences is one viable remedy.

The Middle to Upper Palaeolithic Transitional Process in East Asia: A Preliminary Approach

Takakura, Jun
(Hokkaido University)

Correlations of the changes in biology and in behavior, as well as the search for the cultural differences between the anatomically modern humans and the archaics, have been the important subject of research for over a century in world prehistory. On the contrary, the scarcity of the archaeological and anthropological evidence concerning this issue in East Asia made it difficult to understand the Middle to Upper Palaeolithic transitional process in global context. More recently, a new series of discovery and dating in Korean peninsula, Siberia and Japanese archipelago entered into this discussion.

In the light of these new records, the imperative problem seemed to arise is more likely to concern the definitions of Upper Palaeolithic themselves in East Asia. According to the traditional view points, the existence of blades in lithic assemblages was thought to be the critical criteria to determine whether Upper Palaeolithic assemblages or not.My intention, then, is to work on definitional aspects of the reduction process in lithic assemblages, taking into the consideration of their relative temporal order and orientation. My formulation is very general and places the main emphasis on the conceptual characterization of the each elements of constituting lithic reduction sequence.

The Stone Artifacts from the Wondang-ri Site of the Sixth Excavation in 2003

Choi, Mou-chang
(Konkuk University)

I shall try to describe how they were discovered and excavated at Wondang-ri site under what conditions, and the results and inter pretation that follows:

Stratigraphy of the pit 1(5th excavation, in 2002)(The east section)

1. modern soil 35~40㎝ 2. dark brownish clay 40㎝(middle paleolithic) 3. dark brown sandy clay(including manganes trace lines thickness 90~100㎝, lower paleolithic) 4. brownish clay 54~42㎝ 5. brown reddish sand, 26~16㎝.

From top to base of lower level(level 3, dark brownish clay) to be quite strongly weatherd with manganess trace lines to a variable thick which may on occasion reach a meter(90~100㎝). But lower level(level 3) allthe characteristics indicate a typical lower paleolithics with segment of the circles and choppers and chopping-tools(from the result of 3th and 4th excavation). The second layer that can be to typical middle paleolithic is situated at the top of Wondang-ri deposits. This layer has yielded 53 recognizable tools. There are triangle hand-axes, cleavers, levalloisan flake-blade cores, prepared cores, denticulates, notchs, points, side-scrapers and end-side-scrapers. The levalloisan core and prepared core well represented. It is a levalloisan industry well facetted. Most flake-tools and flakes are short.

Most of the middle paleolithic industries being struck out with a hard hammer. The most numerous being the straight and convex side-scraper. Tortoise is rare. I want to this work goes on, slowly. It took me 6 years to excavate(in 1996~2003) at Wondang-ri site. If I had to do it again, with what I now know done, it would probably take me 10 years.

A Study of the Microblade Flaking Technology in Northeast Asia

Kato, Hirofumi
(Hokkaido University)

Historic developments in Northeast Asia are characterized by border-crossing movements, and the perspective of resent research also has dealt with this broad spatial development of humans and materials. The main issues currently facing the paleolithic studies in Northeast Asia, we can be listed as follows. 1)problems of the periods of humanoid immigration to higher latitudes in Northeast Asia regions. 2)problems of the origin and diffusion homo sapiens in the Northeast Asia in the subsequent periods. 3)problems of the adaptive behavior and the technological innovation of humankind in the period of glacial environments.

Among of them, especially, understanding the origin and diffusion of Late Paleolithic flaking technologies is a crucial problem in the study of this area. In this paper, I will focus the microblade flaking technology in the Northeast Asia. In the Northeast Asia is known the various types of microblade flaking technique, and historically are recorded several famous archaeological sites. Its technological origin has been regarded as the second part of the late paleolithic age. However, recent Siberian researches clearly show that the origin of microblade flaking has related with the initial late Paleolithic age, for example, collections from such sites as Kara-Bom site and Ust-Karakol 1 site in the Mountain Altaj region, Makarovo 4 site, Bratsk sea archaeological sites in the Cis-Baikal region. Also, in Hokkaido island has excavated the Kashiwa-dai microblade complex, dated older than 20ka BP. Situation is changed. Now we should begin to examine the formation process of the microblade flaking technique. Although, studies have been made on the reconstruction of the regional variants for microblade techniques, there is little agreement on studies with holistic point of view. What seems to be lacking is the consideration of the global point of view from Northeast Asia rather than local one.

The purpose of this study is to make a frame for the research design and to examine the formation process and its diffusion waves of the microblade flaking technology in the Northeast Asia. I would like to describe the chronological sequences of the microblade technology at first. Secondly, I will present the technological types on the microblade flaking technologies and diffusion process in the Northeast Asia.

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A Chronology of Late Pleistocene Sites in Hokkaido, Japan

Izuho, Masami
(Sapporo Buried Cultural Property Center)

This paper provides a chronology of the Late Pleistocene sites in Hokkaido, Japan. In order to build a reliable chronology, we examine site formation processes of selected sites: First, we assess validity of 14C dates and site stratigraphy by an application of geoarchaeological methods. Second, we discuss technological characteristics of lithic assemblages from the study sites through an analysis of reduction sequences in flaked stones. Our chronological framework will play an important role in understanding adaptation processes in the circum-Japan Sea region, as well as colonization processes into the Japanese archipelago during the Late Pleistocene.

The Mesolithic Culture in Korea

Choi, Bok-kyu
(Kangwon National Unviersity)

The Mesolithic is considered to be an intermediate period between the Paleolithic and the Neolithic, spanning immediate Post-Glacial era. Some archaeologists in Korea distinguish this time span of new material culture as a separate age, while others consider it to be the last stage in the development of the Paleolithic. After the Last Glacial Maximum (LGM) there was a significant migration of people living on the Korean Peninsula northwards to areas such as East Siberia and North China, including Manchuria.

These new destinations were gradually freed from the huge masses of ice due to global warming. The global climate change after the LGM resulted in radical changes of fauna and flora in the Korean Peninsula, giving rise to tundra-like vegetation that was later replaced by temperate forests. As the vegetation belts moved northwards, the indigenous people developed new ways of life. These changes pertaining to technology, mobility, and subsistence were required to survive in the new Post-Glacial environment.

The first material cultures of the Mesolithic Age in Korea and adjacent areas appear to have been a result of the decline of Upper Paleolithic cultures. Like those of other continents, the cultural decline of the Upper Paleolithic was due to difficulties in adaptating to the rapidly changing environment. The Mesolithic hunters, however, developed bow and arrow technology which marked significant improvements in portability and accuracy of hunting tools. The cultural and technical achievements during the Mesolithic also include the invention of microlithic technology and the incipient domestication of dogs and plants, which later formed the foundation of hunting and cultivating subsistence economy in the early Neolithic. In addition, the recovery of various kinds of fishing gear such as bone fish spear head, barbless bone fish hooks, net weights and floats, demonstrates that the Mesolithic people acquired protein by foraging a broad range of resources, not being limited to land animals. Remains of the Mesolithic culture have been found all over East Asia including Siberia, Maritime region, Mongolia, Northeast China, Manchuria, Kamchatka Peninsula, Alaska and the Japanese Archipelago. Based on this regional distribution of the Mesolithic culture, it has been consistently suggested that Mesolithic sites might be found on the Korean Peninsula. This writer would broadly divide the Mesolithic culture in Korea and adjacent areas into five subregions: Korean Peninsula, NortheastChina, East Siberia, Japan, and Alaska. Concrete evidence of the Mesolithic culture in Korea was found from Hahwagye-ri Sadunji site in Hongcheon-gun. There were several possible Mesolithic sites in Korea that yielded many microliths

including the upper layer of Sokchang-ri site in central Korea excavated in 1965-1974 and the lower layer of Imbul-ri site in southern Korea excavated in 1988. These sites, however, lacked reliable geological evidence and accurate dating.

The Hahwagye-ri IV site excavated from 2000 to 2001, in contrast, has a reliable radiocarbon date of 13,39060 B.P. that came from charcoal samples from the second layer. Subsequent discoveries of the Gigog site (10,20060 B.P.) on the east coast that belongs to the Late Mesolithic, and the Hahwagye-ri I, II, and III sites which are the earliest Mesolithic sites in Korea, also strongly support that the Mesolithic culture existed in the Korean Peninsula during the early Post-Glacial period. Accumulated archaeological evidence allows us to suggest that the Mesolithic culture began and flourished in the coastal areas of Korea during the warm and moist period of the early Post-Glacial.

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Subsistence, Mortuary Practice, and Interdisciplinary Approaches in Japanese Archaeology

Paleoethnobotanical Investigation of Subsistence Practices in Northern Japan During Two Time Periods

Dawn Kaufmann
(Washington University in St. Louis)

Questions relating to prehistoric and proto-historic subsistence practices are of paramount interest in Japan. Archaeological evidence indicates that in the period between 5000-1000 BCE Japan supported some of the largest population densities in the world. The mode of subsistence practiced by Jomon and later peoples has been diversely modeled, with models ranging from strict fishing based cultures to hunter-gatherers to agriculturist societies. Those subsistence based cultural models are still being widely debated. It is only in the last decade that researchers have begun to investigate the subtleties and complexities within the non-discreet entities of hunting-gathering-fishing and food production as a spectrum of plant and animal-people interactions. Paleoethnobotanical studies are one of the most accessible and direct methods of investigating subsistence patterns and practices in the archaeological record providing the evidence with which to evaluate these possibilities.

I analyzed macrobotanical remains from samples recovered from the site of Minamishimamatsu, in Hokkaido, Japan. Architectural remains at Minamishimamatsu indicate two temporal components to the site. While the majority of the site dates to around 1000 BCE, there was also a single pit house structure that dates to around CE 700. The samples in this study were collected in 1990 under the supervision of Dr. Gary Crawford, University of Toronto. This archaeobotanical study includes 1.) samples taken from the single Ezo-Haji component structure, and 2.) samples from a single Late Jomon structure, thus allowing a look at the broad changes in plant use and diet on either side of what is considered the critical period of wet-rice agriculture introduction at 400 BCE.

The work of Crawford and his students demonstrates greater variability in plantpeople interactions in Japan than previously hypothesized. Beginning in the Early Jomon period (ca. 5000 BCE) in Northern Japan, indigenous peoples engaged in varying subsistence behaviors, including wild plant management, and plant husbandry. While wet rice agriculture was never adopted in Hokkaido, other sites in the region have provided archaeobotanical evidence of agriculture. In fact, the earliest AMS date on a rice grains from Japan have been recovered from site in the region contemporaneous to the earlier component of Minamishmamatsu suggesting that plant cultivation, including dry-land rice production,

was a part of the subsistence practices employed byLate Jomon people in northern Japan. In samples from the more recent component I found remains of both domesticated broomcorn millet (Panicum miliaceum ssp. miliaceum) and foxtail millet (Setaria italica) providing strong evidence for a notable degree of cultural investment in agriculture in a culture that has long been viewed as non-food producing.

Cultural Complexity of Jomon Hunter-Gatherers and Changes in Plant Exploitation at Sannai Maruyama

Kim, Minkoo
(University of California, Berkeley)

This paper examines the results of paleoethnobotanical research at the Sannai Maruyama site, which was occupied during the Early and Middle Jomon periods (c. 5900 to 4300 cal BP) in northern Honshu, Japan. Contrary to the expectations derived from the conventional assumption that Jomon hunter-gatherers enjoyed bountiful wild resources, it is argued that the paleoethnobotanical assemblages show considerable temporal changes, indicating people's selection among wide rangeof plant resources. The results of analyses are considered in the contexts of ecological models developed in anthropology, and the implications for understanding cultural complexity of prehistoric hunter-gatherers in East Asia are discussed.

Emergence and Spread of Agriculture in East Asia

Miyamoto, Kazuo
(Kyushu University)

The agriculture of Korean Peninsula, whose origins can be traced back to the cereal agriculture of northern China, spread along the western coast of the peninsula. Broomcorn millet had appeared around 4,000 BC at the Chitamni site, where northern-Chinese style agricultural stone tools such as motors, pestles and hoes had also been employed. The spread of this cultural complex of domesticated grains and agricultural stone tools extending to the southern and eastern coasts of Korean Peninsula coincided with the beginning of the middle Neolithic period on the Korean Peninsula when the pottery style of the western coast spread to these regions along with the northern Chinese agricultural stone tools and willow-leaf shaped polished arrowheads. Because the broomcorn millet and the foxtail millet have recently been found at the middle Neolithic Tongsamdong site on the southern coast of Korean Peninsula, northern Chinese agriculture was probably diffused far to the southern coast of the Korean Peninsula in the period of expansion of this pottery style. This is the first stage of the emergence of Agriculture in north-east Asia. The first stage was derived from a mixed cereal agriculture of northern China. Rice cultivation emerged c. 10,000 BP in the middle Yangtze valley of China, and domesticated rice spread to surrounding areas from this center. It is well known that the domesticated rice gradually spread to northern China, and finally reached to the middle Yellow River valley in the Yang-shao period where and when rice was incorporated among the cereals of the northern Chinese agriculture. On the other hand, the evidence of domesticated rice along the western coast of Korean peninsula has recently increased. The evidence is based on the carbonized rice seeds and rice phytoliths. Date of these specimens are mainly concentrated on c. 2,000 BC, although the evidence of such an early date for domesticated rice in the northeast of the Korean Peninsula and Manchuria has not yet been attached. This evidence and the route of the spread of domesticated rice in inland China indicates that domesticated rice reached to the lower valley of Hang-gang on the western coast of Korean peninsula, from the Shandong peninsula in China. The second stage of agriculture in north-east Asia involved a diffusion of domesticated rice from Shandong peninsula to the lower Hangang valley and southward on the basis of northern Chinese cereal agriculture.

After 1,500 BC, rice paddy field agriculture in southern Korean peninsula was established accompanying with mixed cereal agriculture. This is the third stage of agriculture in the north-east Asia.

At this time the Neolithic age of Korean peninsula changed to the Bronze Age or to the plain pottery period. The culture complex of the plain pottery period was influenced by the Liao-dong district of China. This culture complex is based on the new stone tools such as stone reaping knife, flat plano-convex stone adze, quadrangular polished stone axe with unifacially bevelled edge and Liaodong style axe. This cultural complex was spread to the Korean peninsula from Shandong peninsula through the Liaodong district. The third stage of agriculture produced the Yayoi culture of Japanese archipelago.

The Formation Process of the Custom of Jar Burial in Northern Kyushu, Japan

Tani, Naoko
(Kyushu University)

This paper examines the origin of Yayoi jar burial practice of the northern Kyushu region of Japan. The practice is widely considered to have been originated in Late Jomon jar burial tradition, and it is believed that its genealogy was uninterrupted. However, a re-examination of the distribution, the combination of pottery shape-types used, the manner of deposition, and allied burial goods of the Jomon and Yayoi jar burials has revealed that the character of the jar burial practice changed significantly between those periods.

The speaker concludes that Northern Kyushu Yayoi jar burial practice was established in the beginning of the Yayoi period under influences from the Korean peninsula and was formalised during the final phase of the Early Yayoi period.

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Subsistence, Mortuary Practice, and Interdisciplinary Approaches in Japanese Archaeology

The Treatment of Children by their Society in Ancient Western Japan

Kutsuna, Keizo
(Okayama University)

The purpose of this paper is to clarify the problem that there is a difference in how to treat the child in the ancient society according to the degree of the development.

As for child's grave in Japan, the case buried bringing the pottery coffin which buries the child together in the place besides the adult until the early modern age after Jomon period has sometimes seen in Japan. Then, to avoid the secondary burial, the example of the human bone's remaining limited the region to Setouchi area from an almost exact age to the first term of Kofun period from Yayoi period by the use of the child of a lot of pottery coffins, and examined the transition of the location of the pottery coffin grave. As a result, ①in the early and middle Yayoi period, the one dotted in the same graveyard as the outside of the village, and the adult etc.: ②at the latter Yayoi period, there were the one scattered in the graveyard, but at the sametime, there were the one to take the form to which 3-4 pieces are overcrowded outside the village to increase rapidly, and the one that only the pottery coffin graves are collected in the circle-shaped moated burial precient appeared, and the overcrowdedness form becomame popular. ③ And until the early Kofun period, we can chase a rough transition of returning to the pattern which were dotted from the becoming less of overcrowdedness form.

The above proves that the overcrowdedness of the pottery coffin grave around the village is remarkable at the early Kofun period from the latter Yayoi period. If it is thought that a special location different from the special burial method of pottery coffin and the adult is the appearance of the consciousness of distinction by the group to the child, it can be saidthat the change in this Setouchi region shows the situation which less gradually after the consciousness of distinction by the group to the child rose very much. Because this phenomenon especially became remarkable at the end of the latter Yayoi period.

It is thought that there is a possibility that a social change when the tumulus appeared had a big influence on the change in the consciousness of distinction by the group to the child including such the age rank and the burial method, in a word "the idea of child".

How Many Mirrors? A Simulation of the Discovery of Triangular-rimmed Mirrors in Japan

Walter Edwards
(Tenri University)

A distinctive style of mirror, known in Japanese as sankakubuchi shinjukyo and widely regarded as being of Chinese manufacture (excluding items thought to be Japanese imitations), is found primarily in mounded tombs of the third and fourth centuries AD. Taking its name from the thick triangular cross-section of the rim, this style differs from other Chinese mirrors in exhibiting a highly uniform size averaging 22.3 cm in diameter, and comprising sets of up to nine members cast from the same mold, or from molds made from a single model. Both features are regarded as suggesting a process of mass production. Triangular-rimmed mirrors have received widespread attention in Japanese scholarship, because of the possibility that they represent the style recorded in the Wei zhi as conferred to Queen Himiko by the Wei Court, and also because of the suggestion, made by Kyoto University archaeologist Kobayashi Yukio, that distribution of these mirrors played a critical role in the formation of the first large-scale polity of ancient Japan, the third century alliance centered on Yamato.

While mysteries surrounding this style of mirror cannot be dispelled as long as their place of manufacture remains uncertain, it is worth considering how many mirrors may have originally been brought into Japan and distributed throughout the archipelago. An approach to this question is made possible by these mirrors'character of belonging predominately to duplicate sets. As the ratio ofduplicate-set membership to the total number known can be calculated for every point to date in the historic process of their discovery, any model replicating that discovery can be judged for adequacy by the criterion of how accurately it recreates this ratio. By varying experimentally the various parameters of such models, including the overall size of the original population of mirrors, an upper limit may be estimated for the total number of triangular-rimmed mirrors that may conceivably have been imported into Japan.

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A New Perspective on the Beginning of the Kofun Period Protohistoric Japan: From Group Oriented to Individuals

Matsugi, Takehiko
(Okayama University)

The transition from the Yayoi to Kofun period is characterized as a long-term change of the configuration of material culture. First, enclosed villages which had evoked exclusive group identification gradually changed into the larger open settlements facing the trade routes. Second, collective cemeteries of homogeneous inhumations were replaced by segmented burial mounds including a few coffins each with various grave goods, showing the identity of individual families or persons. Third, the bronze ritual goods, which is thought to have been used in communal ceremonies, were abandoned. These changes progressed during the latest period of the Yayoi era in the main area of the Japanese archipelago, indicating the shift from the group-oriented to the individualizing types of chiefdoms.

The author consideres that this shift was motivated by the restructuring of mentalities which were based upon the fundamental economical changes related in this period. Since the 1st century AD, iron imported mainly from the Korean peninsula became principal materials for tools instead of locally yielded stone. It indicates increasing dependence on the external resources gained through the long-distance trade sometimes accompanied by warlike activities, where particularly talented individuals as traders or warriors had a chance to show off their successes and win reputations which consequently turned into prestige and power. The emergence of these individuals, whom the author names Jonathan after Buck's famous novel, seems to have undermined the bonds of traditional communities which had been represented in exclusive settlements, collective burials and the bronze artifacts for communal rituals. The author concludes that this process resulted in theformation of the individualizing type of chiefdoms characterized by the material culture, such as hierarchic and diversified burials and prestige goods, evoking the differentiation of each persons or families.

A New Approach to Palaeo-topography Using GIS for an Archaeological Perspective: a Case Study in the Kanto Plain, Japan

Tsumura, Hiro'omi & Anezaki, Tomoko
(National Museum of Japanese History)

The purposes of this study are to reconstruct the palaeo-topographies of the prehistorical Japan, to consider the influences of these for human activities, and search for the solutions or analytics to these perspectives by using Geographic Information System (or Science: GIS) directly. Until now as a golden rule, we archaeologists had quoted the results of quaternary research, although such an approach is very rough and sketchy in imagining the human behaviors. And these reconstructed models were not suitable to restore the paleo-synecologies as natural scenery of human actions, either. For instance, when we would like to know of a prehistoric human access channel to natural resources, any assumptions like lifting/dropping the sea-surface uniformly to draw the coastlines are meaningless. The things which we want to reconstruct are not outlines of the seashore, but are concrete details of geomorphological features which are the cost friction for human walking with gathering supplies and which influence, like a local islanding of environment, the paleo-synecologies.

The following approaches were practiced: 1. To reconstruct the palaeo-topographies, many elevation and geo-coordinate information of the volcanic ashes and pyroclastic flow strata were collected from archaeological site reports on the Kanto plain. 2. Using these spatio-temporal data, TIN modeling which is one of the geo-statistical analytics was tried to create DEM in some paleolithic phases with GIS. 3. To assess the cost frictions that influence the prehistoric people's movement, some cost-surface models were constructed from DEM. 4. The site-catchment areas were redrawn based on them. In next step, 5. To inspect the actual situation as human history in archaeology, some specific sources of obsidian were mapped on DEM, and to identify each hinterland, the cumulative human walking costs were allocated based on the Voronoi method. 6. Similarly, to assess the human hunting/gathering or environmental domestication activities and to estimate degrees of a local islanding of environment, the geomorphic quantities in each site-catchment area were compared. 7. From these results, their hinterlands of natural resources and cost-distances were assessed. And finally, 8. These physical geometrical layers were overlaid with some contemporaneous site distribution map layers using GIS. 9. Many trend-surfaces of paleo-environmental attributes were created from site distribution maps and the spatial correlations were

computed among them.

As a result, it is clear that this GIS approach which are is on the paleo-topographies is very powerful and effective to assemble the paleo-environment when we consider a concrete image of prehistoric human activities. We should understand these results as new counterparts of archaeological or geographical methodology. Archeologists must try personally an Archaeo-geographical approach without unquestioningly swallowing the research of another discipline's (Quaternary studies') spatio-temporal scale.

Reconstruction of Japanese Kofun(Mounded Tombs) Using Radar and Resistivity Prospection

Walter Edwards & Okita, Masaaki
(Tenri University)

Many examples are known of kofun (mounded tombs) being destroyed during the economic development attending Japan's modernization, such as mounds Nos. 4, 5, and 6 of the Tamateyama group, sixty-meter plus keyhole-shaped tombs that were leveled for a housing tract. There are surely numerous other cases, however, in which the mound has vanished without leaving any record whatsoever of its existence or disappearance. In addition, among those tombs surviving tothe present, there are many examples in which the mound has been partially cut back in the opening of new agricultural fields or buried during volcanic eruptions, thereby exhibiting changes since ancient times across part or all of the shape. But even when the original outline no longer remains in the surface form of a tomb, by using archaeological prospection methods that examine differences in the physical properties of the underlying soils, it is often possible to reconstruct the tomb's former shape by detecting a buried moat or the base line of the mound.

The utility of prospection in the reconstruction of kofun was first demonstrated by the Nara National Cultural Properties Institute in the early 1960s, with an electric resistivity survey showing thatthe round mound designated as the mausoleum of ninth century Emperor Heizei was in fact a keyhole shaped mound whose trapezoidal section was leveled during the early eighth-century construction of the Nara capital. Since 1997, our research group at Tenri University has been assembling the equipment and software necessary for radar and electric resistivity prospection, and accumulating experience in the application of these methods to the study and reconstruction of Japanese kofun. In this presentation, we wish to exhibit the principle results of some of our most recent work, including a study made in the 2003-04 Academic Year at the No Tomb Group in the town of Ono, Gifu prefecture, thereby indicating the possibilities for archaeological prospection in the study of the Kofun period of Japan.

Ainu Archaeolgy & Ethnogenesis

Wendy Frederick
(San Francisco State University)

Ancient Belief, Contemporary Ritual: Modern Use of Buddhist Artifacts

Christine Finn & Robin Coningham
(University of Bradford)

Architectural, archaeological and epigraphic sources attest to the dynamic nature of the use of space in monument Buddhist complexes in South and Southeast Asia (Coningham 2001). Whilst these examples have examined the alteration of individual sites and their buildings, such as at Sanchi (Marshall et al. 1940), few scholars have considered the effect of the movement and reinstallation of cult items or objects. Indeed, such is the confusion surrounding such developments that some scholars cite its evidence in the archaeological record as looting (Grave 1995). This paper will consider the way contemporary Buddhist practice incorporates ancient objects and ritual and will consider the evidence for such behaviour in the past.It is inspired by Finn's experience and attendance at ceremonies in Thailand and the UK in 2001, in which a significant Buddha rupa was made, with great ceremony, at a traditional sculpture studio outside Bangkok, and installed, with similar ritual observance, in the heart of a prehistoric landscape in the United Kingdom. Coningham, an archaeologist specialising in south Asia, will act as a discussant as both consider the ways in which the context of the statue is changed - and ways in which it remains thesame - in its different cultural setting, and the role in which location plays in this context. Finn has previously discussed the use of ancient practices and artifacts in the setting of native American prehistoric sites, and this paper will ask also whatcan be learned from the observance of contemporary ritual derived from ancient practice. Coningham has worked at the Buddhist sites of Lumbini, Kapilavastu and Anuradhapura and has an interest in the archaeological visibility of Buddhist practice.

The Stupa-Pagoda Tradition in East Asia

Yang, Tanya
(University of Arizona)

The pagoda is one of the most important buildings in Chinese, Korean, and Japanese Buddhist temples. It is widely recognized that the Chinese, Korean, and Japanese pagoda originated from the Indian stupa. In China, Korea, and Japan the pagoda usually maintained the Indian stupa's role as a place to entomb a relic of a Buddhist sage or as a votive monument. However, the form of the Indian stupa and the East Asian pagoda do not resemble each other. Existing theories follow one of two basic approaches to explain the differences. The "horizontal" approach argues that the Indian stupa is the prototype for the pagoda. The second, the "vertical" approach, tries to explain the development of the pagoda in China by identifying Chinese antecedents and influences. These theories have problems with chronology, ignore symbolism at work in each particular culture or only analyze certain aspects of the tradition. I will present a theory that looks at form, function, chronology and symbolism to explain the development of the East Asian pagoda tradition.

I propose that the development of the East Asian pagoda is neither "horizontal" nor "vertical."The wooden pagodas built during the Tang Dynasty in China and the Nara Period in Japan retain a great deal of influence in their form and symbolism from the Indian stupa, such as the central pillar, the finial, and the relic container at the base. At the same time, the monument has the basic form of Han Chinese towers, added elements that had Chinese cosmological significance and were compatible with the core formal elements of the Indian stupa, and produced the East Asian pagoda. The elements found in both the Indian stupa and the East Asian pagoda was included in both monuments because they were already significant cultural icons. Although the monument retained the form created in China when it was introduced to Korea and Japan, additional refinements were made.

I will demonstrate how the East Asian pagoda developed from its origin in India as itpassed into China via Central Asia and was transformed in China before being introduced into Korea and then Japan. I will explore the style of the architectural elements and religious symbolism as well as the utilitarian aspects of architecture in an analysis that combines the often isolated approaches of art history, religious studies, and archaeology. I assert that trade relations and the exchange of ideological systems between India, China, Korea, and Japan can be better understood by the study of these monuments.

The World Bank and the Protection of the Cultural Heritage: Recent Policy Development and Practice

Mahammed A. Bekhechi

(The World Bank)

Over the past decade, the World Bank has developed a corpus of rules, principles and procedures to mainstream environmental and social protection in projects and activities it finances. The result of the process was the consolidation of a corpus of "safeguard policies" which, among other policies includes a cultural property protection policy known as OPN 11.03 (to be converted as Operational Policy 4.11).

The objectives of OPN 11.03 are threefold: (i) ensure that cultural property is identified in Bank-financed projects, (ii) ensure that project design complies with the Borrower's national laws and regulations governing the protection of cultural property, and (iii) contribute to development of the Borrower's capacity to identify and protect cultural property.

In practice, this policy was trigerred in various projects including large infrastructure projects such as the Chad-Cameroon Pipeline, or the Bolivia-Brazil Pipeline. But it is also trigerred in regular projects and raised in some cases many implmentation and enforcement issues which the paper will discuss.

Environmental Constraints and Cultural Adoptions During the Third Millennium B.C.

Siva Rama Kirshna Pisipaty
(Deemed To Be University, India)

The first civilization is now generally placed in the third millennium BC with an advent of metal. It marks the raise of civilizations like at Mesopotamia, Egypt, etc. By the end of the second millennium BC, these urban elements diverted and were converted into other forms. Of course, the greater cultures do not die, they simply fade away and change into other forms. The influencing factors and causes behind the collapse of the first urban civilization and then the human crises behind evolution of the new way of practices like vedic rituals (burning of herbals, offerings to Fire God, worship of nature and elements, etc.) are the subject matter of the present paper. Further, it marks an attempt to find the possible causes behind the raise of new social systems of practices, which not only prevail thousands of years but also were the major universal practice of the early human. Iran, Afghanistan and southern parts of central Asia may be collectively referred to as 'Greater Iran'. Among many factors, environment or ecological determinism or what is now called 'Green Imperialism' and epidemiological or pathological problems are mainly considered and explained scientifically for the cultural changes/transitions during the period under consideration in general and particularly in the Greater Iran Region. Nail flooding records and palaeo-climatists and environmentalists reports are considered for discussion. Further, Early Sindh Vedic literature is also considered and madean attempt to explain scientifically the cultural responses according to the changes in nature and environment. Many leguminous plants/herbals, which are described in the early literature and practiced to fire along with the other materials, are also considered for study. Some experimental observations (burning of herbals along other materials) and ethnological data analysis are a source matter to the paper. Because, many traditional practices which were stated during the period under discussion, are still prevailed and practices in Sindh and beyond Sindh regions.

Terracotta Beads in Ancient India: An Archaeological Approach

Om Prakash Srivastav
(Aligarh Muslim University)

Beads are the basic and earliest ornament worm by the people in ancient India.

Pre and Proto historic sites have yielded different types of terracotta artefacts in abundance. Beads are the specific type of ornamental item amongbangles, armlet, pendants, ear-study etc. Beats are found in different metals and material but the present is based on archaeo-literary study of terracotta beads of ancient period only. We have found the terracotta beads of different shapes and sizes lie flat, irregular, globular, spherical aricha-nut shaped, drum shaped oval etc. I have categorized them all accordingly.

An attempt has been made to focus on its prolific use, its technique and its trend in environs and other possible use if any. It was commonly worn by men and women. Terracotta bead have been reported in larger quantity from chalcolithic and Iron age sites. However, by studying these implements archaeologist have tried to deduce some inferences regarding human activities and the stage of life they were leading. There life pattern and cultural activities are reflected through their workmanship. The minimum information regarding the technological development is gleaned by studying such artefacts created by pre & proto-historic human beings. Through the frequency and quality of these artefacts we are also able to conceive the affluence of the society. Moreover, our study also help to establish socio-economic structure of the society under study.

Pre-modern Irrigation Technology in Bundelkhand: Based on the Survey of Waterworks

Vinod Kumar Singh
(Aligarh Muslim University)

This paper is based on the detailed surveys of waterworks undertaken by us in the region of Bundelkhand.This study attempts to analyse the indigenous technology through which the people in Bundelkhand preserved and used water for irrigation purposes.It studies the pre-modern technology involved in the collection, storage and circulation of water. Hopefully, our study shall shed new light on the extent to which the Indian civilization was receptive to science and technology in the pre-modern period.

A large part of south Asia is a semi-arid zone. Conservation of water in various ways for irrigation as well as for human consumption has always remained an important civil need in this region. In the pre-modern period this need was sought to be met by constructing dams, barrages, embankments, step-wells, aquaducts and canals. Remains of these pre-modern waterworks scattered all over the sub-contient need to be studied systematically. A detailed study of these structures may enable us to understand the techniques and devices used in pre-modern India for conserving water. At the same time this investigation should also make it possible for us to relate the development of these devices with the changes in the architectural forms and techniques.

It is also to be borne in mind that the ground water hydrology is the science of occurence, distrubtion and movement of water below the surface of earth. The largest available source of fresh water lies underground. The total ground water potential is estimated to be one third the capacity of ocean. The main source of ground water is precipitation. A portion of rain falling on earth`s surface infiltrates into ground, traces down and when checked by impervious layer to travel further down, forms ground water. The ground water reservoir consists of water held invoids with in a geological statum. I have also plotted different kinds of water works on the map of south Asia. Slides would also be shown of these structures along with their layout drawings.

Intra-disciplinary or Multi-disciplinary? Some Thoughts on Current Archaeological Research Approaches

Lu, Tracey Lie-Dan
(Chinese University of Hong Kong)

Since the 1960s more and more scientific approaches have been applied to archaeological studies. Multi-disciplinary has become a norm in archaeological methodology in the west, as well as in mainland China after the 1980s. In South China, multi-disciplinary approach has been applied to two archaeological assemblages from 1999 to the present. Pollen, flotation, phytolith and residue analyses have been used to reconstruct the past environment and natural resources, as well as human subsistence strategies, while use-wear and archaeological experiment were used to investigate the chin opratoire of stone and organic tools, and the manufacturing of pottery.

The integration of these approaches have obtained new data, enabling a much better understand of the past culture and natural environments. However, after several years of working experiences, it seems that there are questions arising. What is multi-disciplinary approach? Does archaeology need a multi- or intra-disciplinary study? What are the pros and cons of applying various scientific approaches in archaeological studies? How to interpret discrepancies between different disciplines? These questions will be briefly discussed in this paper.

Changes in Plant Use in the Yi-Luo Basin

Lee, Gyong-Ah & Gary W. Crawford
(University of Toronto)

Plant remains from the Yiluo basin, spanning the Late Peiligang through the Han periods (6000 BCAD 220), are providing the first comprehensive diachronic view of plant related subsistence and human-environmental interaction in northwestern Henan, China. As a part of the Yiluo River Collaborative Archaeological Survey Project our archaeobotanical analysis focuses on 55 samples from nearly two-dozen sites that span a 5000-year period. Most samples come from house floors and pits exposed in terrace cuts. At the beginning of this period is the relatively egalitarian Peiligang while the latest portion of the sequence represents sociopolitically complex societies. The project aims 1) to document economic changes through time in the Yiluo region; 2) to establish a fine chronology and the sequence of agricultural development in the Yiluo basin based on AMS dating of crop remains; and 3) to compare the palaeoethnobotany ofsite types (primary, secondary centres and peripheries). The analysis is ongoing, but so far among the carbonized plant remains are14 identified plant taxa and a few unidentified types among the more than 31,000 seeds. Foxtail millet is the main crop in the earliest samples in the collection (Late Peiligang period). In later periods other cultigens in addition to foxtail millet are broomcorn millet, rice, and wheat. Two other plants, beefsteak plant and soybean have been recovered from post-Peiligang samples but their domesticated status is open to question. Foxtail millet is dominant in all periods, but wheat became abundant in the Early Shang or Erligang period (ca. 16001300 BC). Rice appears to have been of little significance until the late period in our samples although phytolith analysis suggests the presence of rice in the Yiluo basin from the Late Yangshao period. Although the number and contextual diversity of the samples is small, the archaeobotanical analysis shows considerable promise.

Wild and Domestic Water Buffaloes in China: Zooarchaeological Investigations

Liu, Li
(La Trobe University)

This project is an interdisciplinary approach to the study of water buffaloes, including zooarchaeological and genetic investigations. It will be presented in two parts: this paper focuses on a zooarchaeological study of several buffalo assemblages, and the following paper by Dongya Yang discusses the implications of genetic analysis of buffalo remains. Buffalo remains have been found at many Neolithic and Bronze Age sites in China. Most of them have been identified to Bubalus Mephistopheles, which is generally regarded as a domesticated form. Among these sites Hemudu in Zhejiang is the oldest (ca. 5000-3000 B.C.), providing the earliest date for domesticated buffalo in the world. It is notable that B. Mephistopheles and the modern domestic swamp buffalo in Asia (including China), Bubalus bubalis, are different species; the latter is domesticated from a central Indian stock of wild swamp buffalo, called arni (Bubalus arnee).

Some scholars believe that B. bubalis was introduced into China from the south in the second millennium BC, while others insist that the B. bubalis in China was domesticated locally. However, neither opinion is supported by hard evidence. In this current study, we investigate taxonomic and genetic differences between several buffalo assemblages from China, analyze their status as either wild or domestic, discuss the relationship between buffalo and humans, as revealed in archaeological contexts, and search for the earliest appearance of domestic buffalo in China. The results of our initial investigation suggest that the buffaloes found at Neolithic and early Bronze Age sites were most likely wild animals, and that more than one species may have existed. The activities associated with wild buffalo hunting and feasting were a long-standing cultural tradition in ancient China, with significant ritual, political, economic and ecological implications. The understanding of this tradition provides new insights to the study of the development of complex society in ancient China.

When and how the domestic buffalo was introduced into China remain to be investigated in the future, but some clues point to a trade route, known as the Southern Silk Road, which existed in the first millennium BC, if not earlier, connecting southwest China with South Asia.

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Interdisciplinary Approaches to Chinese Neolithic and Bronze Age Archaeology

Wild and Domestic Water Buffaloes in Ancient China: Ancient DNA Analysis

Yang, Dongya & Liu, Li
(Simon Fraser University; La Trobe University)

This study employed DNA approach to identify buffalo-like ancient faunal remains unearthed from Neolithic sites (4,500 BP) in China. The objectives were to identify whether these bones were from buffaloes, and more specifically, whether they were from wild or domestic buffaloes.

Mitochondrial DNA fragments of less than 200bp were successfully extracted and analyzed in a dedicated ancient DNA research facility using the polymerase chain reaction (PCR) technique. Strict contamination controls and vigorous decontamination measures were exercised throughout the lab process. Four of six specimens yielded positive and reproducible ancient DNA sequences. The BLAST search against GenBank and phylogenetic analyses indicated that these DNA sequences were closely related to those of buffaloes, pointing to the identity of buffaloes. Some significant differences, however, were observed from those DNA data of modern domestic buffaloes, indicating that the ancient remains might represent a wild type of buffalo or a different type of domestic buffalo.

The preliminary results of this study have demonstrated that ancient DNA can be extracted from ancient buffalo remains as old as 4,500 years. When more samples from more sites are tested in the future, DNA variation patterns of ancient buffaloes should be revealed and regional and temporal changes of buffaloes in China could be reconstructed. The genetic information can be usedto understand the fate and history of indigenous buffaloes in China, and their relationship with the later domestic water buffaloes in China. It is hoped that combination of ancient DNA and other lines of archaeological evidence will shed new light on the natural history of water buffaloes in China and adjacent regions.

Ethnoarchaeology on Stone and Lime Production: A Case from Huizui

Chen, Xingcan
(Institute of Archaeology, CASS)

Specialization of craft production is one of the most important phenomena of the early states. The Erlitou culture, roughly dated to 1900-1500 B.C., as one of the earliest Bronze Age cultures in China, mainly located in the Yiluo basin in the Middle Yellow River valley, is commonly believed as representing a state level society, while its predecessor the late Longshan culture (2300-1900 B.C.) is thought to have come to the eve of the civilization. But where did the early states like Erlitou get their natural resources like stone tools and lime? How did people make their stone tools and lime? How did people organize their stone and lime production? Is there any specialization in their craft production? Little attentions have been paid on such kind of things so far. However, our new excavation at Huizui site in Yanshi city, Henan province, 20 km to the southeast of Erlitou site, at the foot of the Song Mountains has provided important clues in answering those questions.

Base on an interdisciplinary approach to the study of the stone tools and lime production at Huizui, it can be sure that Huizui may have been one of the most important providers of the stone tools and lime of the early states. Stone blanks, flakes, whetstones and broken stone tools are everywhere at the site, mainly made of oolitic limestone and sand stones (for whetstones mainly), are far from satisfied its own need. The unsuitable stone materials for making stone tools and those of the broken stone blanks and tools were put into the lime kilns in producing lime. The production of stone tools and lime were thus interdependent though they had different production of their owns. The Huizui site, producing stone tools and lime in a large scale as early as in the lateLongshan culture, continued to be one of the massive production centers of those products in the Erlitou period. Is there any difference between the Longshan and Erlitou periods regarding the production from the perspective of craft specialization? Did the Erlitou polity have any form of state controls on the stone mining and production of the stone tools and lime?

An ethnoarchaeological study of the stone tools and lime production at Xikouzi village, about 5 km to the east of Huizui site may help us answer those questions. Our study shows that Xikouzi is one of the villages specializing in stone production in the area. The distribution pattern of the stone materials, products and broken stones, flakes and chips are everywhere, is similar to what we have seen at Huizui site archaeologically. The similarities may point to the same production purpose: both of them producing their products for others rather than themselves. Though Xihozi village have a kind of specialized

production pattern, however, almost all workshops are family-based and nobody is a full-time stone craftsman---he is living in the village and has to do his agricultural job if needed. This may have been the case to the Huizui people though the assumption is far from been proved. Interestingly, the stone production at Xikouzi, like we have seen in Huizui site, is interdependent with the lime and carpolite production. While the larger stone flakes and broken products are moved to the lime or carpolite production places, the smaller ones are sent to only carpolite producing factories. Stone miners, lime and carpolite producers and the people who are responsible for stone transportations are different specialized people, though they are basically farmers and are never free from agricultural labors. The family-based stone and lime production and transportation models may help us in understanding the craft production of the early states. The early states like Erlitou polity may have had a rather loose control of the stone mining and stone and limeproduction in their periphery areas. Little differences of stone tools and lime production between the Longshan and Erlitou culture may have witnessed the similar production pattern of the two different periods.

Early Shang China: Metropolitan Ding Vessels and the Question

Elizabeth Childs-Johnson
(American Council of Learned Societies)

In this paper it is proposed that the ritual bronze ding tetrapod and tripod function as signifiers of royal power. The history of the tetrapod ding is reviewed from its origins in Early Shang to Late Shang times as is the evidence for the ding rite in Late Shang bone inscriptions. On the basis of both paleographic and archaeological evidence it is maintained that the ding tetrapod during the Early Shang period was a tool for measuring metropolitan power and influence.

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A Research that the High-Radiogenic-Lead in Shang Bronzes Originated in South-Western China

Jin, Zhengyao
(Research Institution of World Religions, CASS)

An important scientific fact has been found that numerous Shang bronzes unearthed from archaeological sites in valleys of Yellow river and Yangtze river contained so-called high-radiogenic-lead (HRL) using lead isotopic analysis. This suggests that there was an ancient 'bronze road' for transporting raw materials or products between the two valleys in Shang dynasty. The author has long argued that the source of the HRL metal materials used in Shang bronze making could be the area of south-western China ("the South-western theory"), but a number of other scholars have argued that the source could be Qinling Mountains of northern-central China. Here the author replies to his critics.

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Anyang Bronze Casting Technology: A Study of Section-mold Technology and Compositional Analysis of Molds

Li, Yung-ti
(Institute of History and Philology, Academic Sinica)

The paper examines mold fragments excavated from Anyang in the 1930s by the Institute of History and Philology (IHP), Academia Sinica. Through comparison of mold fragments found at different Anyang bronze foundry sites, the paper arguesthat a significant change in the section-mold technology took place during the Yinxu period. Changes include the introduction of mortises and tenons on the mold sections, and the use of base extension for cores. Both would have significantly enhanced the stability of the mold assembly, which would in turn reduce the rate of failed casting and increase the productivity of the foundry. The two types of technology can be observed among the molds excavated by IHP. The Type I molds, found mainly underneath Foundation B5, Xiaotun, represent the simpler and perhaps earlier technology. The Type II molds, which are found north of Foundation B5 at Daliankeng, and are the most common type of molds found at other Anyang foundry sites, represent the more advanced section-mold technology. Compositional analysis is then performed on Type I and Type II molds in order to determine if different materials or manufacturing techniques were used. The paper ends with a discussion on the socio-political variables and the possible impact of such technological changes.

The Burial Population of the Qucun Cemetery

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The excavation of several hundreds of tombs from the Western and Eastern Zhou periods near the assumed first capital of the Jin polity at Quwo in southern Shanxi has provided materials relevant to the study of the polity's social structure. This paper, based on statistics culled from the published reports and historical considerations, compares the new evidence with what was previously known from other sites, pinpointing broad similarities but also some unique features that may be significant for understanding the local situation.

Future of East Asian Archaeology: Roundtable Discussion

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