Interdisciplinary Challenges of the Cultural History of PaleoAsia Project and its Database Development: Lessons Learnt

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The Cultural History of PaleoAsia is a Japan-funded large-scale research project aimed at understanding the distinct patterns in the formation of modern human cultures across Asia. More than 50 researchers, including archaeologists, cultural anthropologists, mathematical biologists, and paleoenvironmental scientists, have collaborated for this project. A team of the project is developing an archaeological site database to compile information on excavation, radiometric dating, lithic industry, and bibliographical reference. When this database was shared with natural scientists for joint research, the team found it difficult to share the key concepts such as culture, environment, and technology with them. Therefore, along with developing the database, the team is trying to span conceptual boundaries among the different domains involved. This invited talk shares the team's experience as lessons learnt and discusses how we can overcome such an interdisciplinary challenge.

To tackle this issue, the team applied lexical analysis, network graphs, and questionnaire surveys. First, a lexical analysis of the full text of the project's conference proceedings, annual reports, and website revealed that the term 'culture' was used in the context of materials (e.g. lithic culture, ceramic culture, etc.), geography (e.g. cultural zones), temporality (e.g. Aurignacian culture) and dynamics (e.g. cultural ecology). Second, the progress of interdisciplinary co-authorship was monitored through a network graph analysis of the conference proceedings; the number of co-authors was high in the archaeology groups and low in the cultural anthropology group. Third, a questionnaire survey revealed that cultural anthropologists prefer single authorship in comparison to other researchers. Regarding the fundamental concept of culture, 70% of the archaeologists chose 'behavior'. Among cultural anthropologists and mathematical biologists, there was no poll for 'materials', while the numbers for 'behavior' and 'information' were almost equal. Based on this evidence, the team is facilitating scholarly communication among researchers with different values and thoughts for better collaboration.

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