

The archaeology of the 21st century: Being anthropological, scientific, and across disciplines (with a little help from AI)

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Introduction

If one asks ChatGPT of OpenAI™ what the future of archaeology will look like, and VH did so in early June 2023, the answer – no matter how often you treat the tool – looks about as follows:

“The archaeology of the 21st century represents an exciting and dynamic field that encompasses various disciplines, including anthropology, science, and numerous other areas of study. This multidisciplinary approach allows archaeologists to gain a comprehensive understanding of past human societies and their interactions with the environment. Here are some key aspects of 21st-century archaeology:

Technological Advancements: The 21st century has witnessed remarkable advancements in technology that have greatly impacted archaeological research. Remote sensing techniques, such as LiDAR (Light Detection and Ranging), satellite imagery, and ground-penetrating radar, have revolutionized the way archaeologists explore and map ancient landscapes. These technologies enable the identification of buried structures, sites, and features without extensive excavation.

Digital Archaeology: The digital revolution has transformed archaeological documentation, analysis, and preservation. Archaeologists now use computer modeling, Geographic Information Systems (GIS), and virtual reality to create digital reconstructions of sites and artifacts. This digital approach facilitates data management, enhances public engagement, and enables detailed analysis without physical contact with fragile archaeological remains.

Environmental Archaeology: The 21st century archaeology recognizes the significance of the environment in shaping human history. Environmental archaeologists study the interplay between humans and their surroundings, investigating factors like climate change, vegetation patterns, and resource exploitation. By analyzing ancient flora, fauna, and sediment samples, researchers gain insights into past human adaptations, agricultural practices, and long-term environmental transformations.

Bioarchaeology and Human Osteology: Bioarchaeology focuses on the study of human remains to understand aspects such as diet, health, migration, and social structures. Advances in DNA analysis have revolutionized this field, allowing for the identification of genetic relationships, migration patterns, and the study of ancient diseases. Human osteologists analyze skeletal remains to reconstruct past populations' demographic profiles, activity patterns, and health conditions.

Experimental Archaeology: Experimental archaeology involves replicating ancient techniques and practices to better understand how past societies lived and worked. By recreating tools, structures, and artifacts, archaeologists can test hypotheses about production methods, technological advancements, and the functional aspects of objects. This hands-on approach provides valuable insights into the practical aspects of ancient life.

Public Archaeology and Community Engagement: The 21st century emphasizes the importance of involving local communities and the public in archaeological research. Collaboration with indigenous peoples, local stakeholders, and educational institutions fosters a deeper understanding of herit-

age and helps protect archaeological sites. Public archaeology initiatives, including outreach programs, excavation tours, and online platforms, allow people to engage directly with the past and contribute to archaeological knowledge.

Global Perspectives and Decolonization: Archaeology in the 21st century embraces a more inclusive and diverse approach, acknowledging the contributions of marginalized communities and indigenous knowledge systems. Efforts are made to decolonize archaeological practices, collaborate with descendant communities, and challenge Eurocentric biases. This approach encourages a broader understanding of the past and respects the cultural heritage of all societies.

Overall, the archaeology of the 21st century combines traditional archaeological methods with cutting-edge technologies, interdisciplinary collaborations, and a focus on inclusivity and public engagement. This holistic approach provides a more nuanced understanding of past human societies and their interactions with the world around them.

Well, this is such a generic answer that virtually everyone can sign in. To some of the points, one can agree more, to others perhaps less. But this is no more than a personal preference. What is, however, not considered, as it was not part of the initial question, is the fact that there never was, in the 20th century, 'One Archaeology.' Archaeology always was manifold and comprised of various branches and directions, often taught at universities in independent institutions, such as Classical, Christian or Near Eastern Archaeology, to name but a few. Diversity is also the keyword when it comes to the methods and techniques being used, from a more comparative and humanistic to a serious data-based and scientific approach, again amongst others.

But regardless, it is of course notoriously difficult to talk about what the future will bring. Checking for literature, one can also easily see that this is not the first attempt to look into the future of archaeology. Examples go back to the 1980s and include, following a brief survey, Davis (1989), Stutz (2018), and Pilaar Birch & Szpak (2022).

An attempt will be made here nonetheless, with reference to the discipline of archaeology

at the University of Helsinki (henceforth *Archaeology@Helsinki*). Please take note that this essay represents personal reflections gained over a period of five years by the 'first' author rather than an all-comprising overview. It thus includes some extracts 1) out of my inaugural lecture at the University of Helsinki, held in early December 2018; 2) the reproduction of a document on the strategic development of the discipline VH was tasked to write on his appointment in Helsinki in summer 2018; and 3) parts of a short reflection on *Archaeology@Helsinki* written for its Facebook page in March 2023. Due to this essay format, VH has added only the most essential references, summed up in a short bibliography, and only included a handful of figures.

Cycles in archaeology of the 20th century

Embedded in any future are patterns of the past. No one knows this better than a historian or an archaeologist. Understanding the future of archaeology therefore requires to first look back. It is here, in the 20th and early 21st centuries, where an interesting feature can be observed, namely cycles of predominant methodological currents to which most professional archaeologists feel attracted to and build their research models upon.

VH presented some evidence of these cycles, first described to my knowledge by Kristian Kristiansen (2014), along ideas on the future of archaeology in general, in the mentioned inaugural lecture. What follows in this section are extracts from that presentation.

Where is Archaeology as a discipline standing today and where will it be going tomorrow?

The beginnings of archaeology as a serious discipline go back more than one-and-a-half centuries. The Swede Oscar Montelius and the Dane Christian Jürgensen Thomsen (with his Three Age System) are the prototypes for this phase, but several more scholars could be added. Their age was recently dubbed as that of the 'First Scientific Revolution' in archaeology as it closely leaned to Charles Darwin and his theory of evolution as well as the then

emerging disciplines of geology and biology. It also shadowed their respective methods and techniques.

What then followed throughout the 20th century were different directions, sometimes more on the humanistic *Kulturgeschichte* (cultural history) or ethno-historical side, and sometimes more on the data and scientific side. The various protagonists include Gustav Kossinna from the early 1900s, and later V. Gordon Childe, for a culture-historical direction. Here in Finland, this direction is well represented by the first generation of Professors of *Archaeology@Helsinki*, i.e., Aarne Michaël Tallgren and Aarne Äyräpää (Europaeus). Key figures representing the more data/science-based archaeology with its new quantitative and statistical methods since the later 1960s are Lewis Binford and David Clarke. These methodological developments gave rise to the birth of the so-called ‘New Archaeology’ or ‘processual archaeology’, only to be succeeded by the postmodernism of post-processual archaeology in the late 1970s. Names to be highlighted in the

context of post-processual archaeology are Michael Shanks, Christopher Tilley, and, most prominently, Ian Hodder. Contrary to many western countries, the ‘New Archaeology’ never made a proper impact on Finnish archaeology (Marila 2018).

We can also arrange these ‘phases’ in a different way, as ups and downs in circles along a timeline (Figure 1).

Then it rather appears as a wave of either being sometimes more scientific or humanistic. Various technological innovations were tying in from the mid-20th century, such as the radiocarbon revolution in the later 1950s, although radiocarbon dating wasn’t widely accepted among scholars until the 1980s–1990s (when, partially, dendrochronology came to its aid); or various metallurgical analyses from the 1960s. To add are likewise the introduction into archaeology of new quantitative and statistical methods. For Kristian Kristiansen, these all ring in his ‘Second Scientific Revolution’.

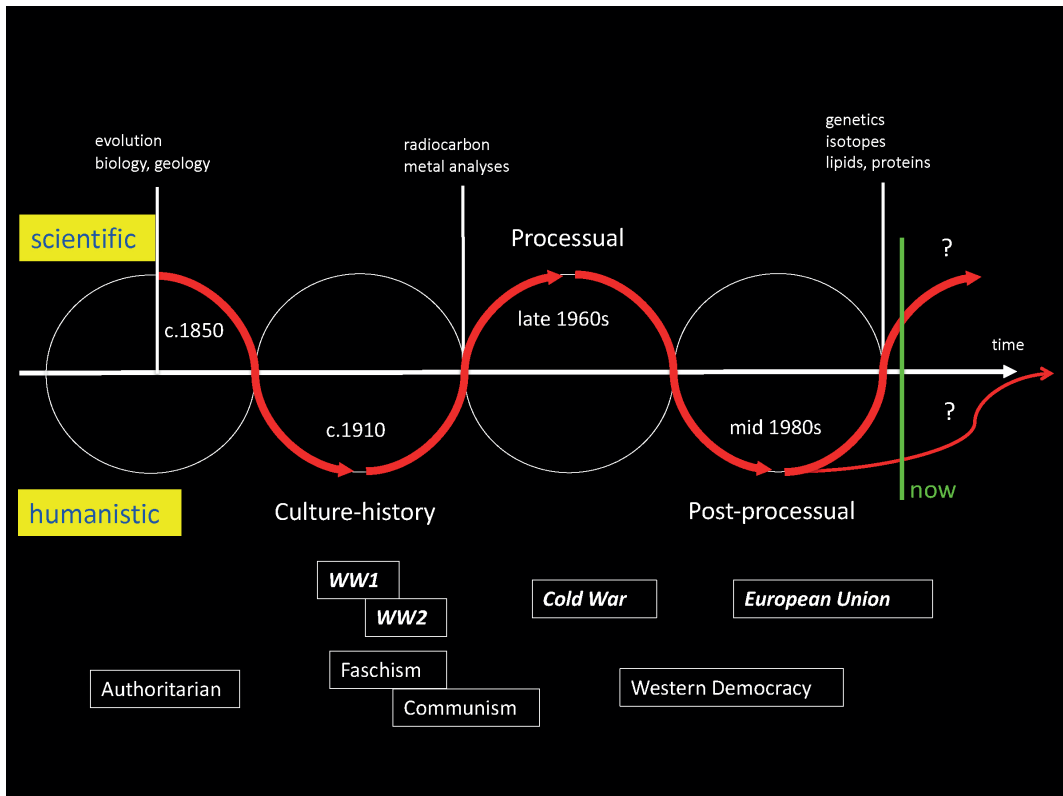


Figure 1. Methodological and ideological directions of archaeology in the 20th and 21st centuries. Image credit: Volker Heyd.

However, culture-history never expired. It was still the prevalent perspective in Germany and many other continental and Scandinavian countries throughout the post-war-period, for example. And so was processual archaeology of course not entirely superseded by post-processual. Also, socialist and Soviet materialism, not to be detailed here but followed by archaeologists from a third of the European continent, were also a focus for much of the 20th century, as did French structuralism. And don't forget the power of the political systems, the *Zeitgeist*, and 'conflicts' like WW1, WW2, Cold and Vietnam Wars; or of a single new discovery that can trigger new archaeological approaches, like Ötzi the Iceman did in the early 1990s. In consequence, it is probably not so much about cycles, which do exist, but methodological and ideological diversification, which is especially visible from about the mid-20th century. New waves do not replace older ones, but supersede, while the previous currents carry on.

Diversity in the archaeology of the 21st century

And now in 2023? Where are we going in the next decade or two? We think we will continue diversifying, but differently than before, and will head towards three major directions.

The first one is clearly labelled under the SCIENCES:

In the realm of archaeology, a new scientific revolution is underway, marked as the third in line, following the groundbreaking evolution theory and radiocarbon dating, as noted by archaeologist Kristian Kristiansen. This latest revolution has been fueled by an array of scientific breakthroughs, with genetics and the emerging field of ancient DNA playing a pivotal role.

The resurgence of archaeology in the scientific arena can be traced back to the 1980s, but it gained exceptional momentum with the pioneering work of Svante Pääbo in Neanderthal ancient DNA research, published from the second decade of the 21st century. His contributions to evolutionary genetics and paleogenetics led to his Nobel Prize, underscoring the profound impact genetics

was having on archaeology. However, a significant turning point came in 2015 with the publication of the first Bronze Age ancient DNA in two articles in *Nature*, opening new avenues for unravelling the mysteries of our human past. Perhaps this is only my own recollection, but it was also in 2015, after the two *Nature* papers and their links not only with archaeology but the epic question of the spread of Indo-European languages, that also newspapers and magazines across the globe jumped on the ancient DNA method and their results, thus giving it wider publicity and credibility (Kristiansen 2022).

But the integration of archaeology with other scientific disciplines does not stop at genetics. Isotope analysis, biomarker lipids, proteomics, bio-anthropology, and geophysics technologies have made remarkable progress in scientific analyses, data collection and remote sensing. Archaeologists are increasingly embracing a multidisciplinary approach, collaborating with scientists from diverse fields, adopting their methods, and even publishing in their journals. This collaborative spirit has both positive and negative aspects, as it opens up new avenues for research but also necessitates careful navigation of ethical and cultural considerations. Moreover, the role of computer sciences, big data mining, virtual reality, and artificial intelligence in archaeology cannot be underestimated. These tools offer unprecedented opportunities for data analysis, modeling, and visualization, enabling archaeologists to explore and reconstruct the past in ways that were once unimaginable.

As archaeology continues to evolve and integrate with various scientific disciplines (see also Kristiansen 2022), it is moving closer to becoming what could be aptly described as 'The Science of the Human Past.' This evolution aligns with the vision of institutions like the Max Planck Institute, which emphasizes a multidisciplinary approach to understanding our history. In this new era, archaeology stands at the crossroads of scientific discovery, poised to reveal ever more profound insights into the human story through the synergistic combination of traditional excavation and cutting-edge scientific techniques.

The European Union's Horizon 2020 ERC Advanced Grant *YMPACT* (grant agreement no. 788616) project embodies a multidisciplinary and scientific approach at its core (Figure 2). It bridges

the realms of archaeology, biosciences, and environmental sciences, harnessing the power of diverse scientific disciplines to address pressing 21st-century questions. Through the integration of fields like ancient DNA, bioanthropology, isotopes, biomarker lipids, palaeoclimatology, and soil sciences, the project explores multifaceted aspects of human history. It delves into migration patterns, land use practices, and the complex interplay between identity and ethnicity. Additionally, YMPACT investigates admixture, interactions, and historical disease dynamics, shedding light on the intricate tapestry of our past and how it shapes our present.

The second direction is for me, in a way, the countermovement, the moment of balancing, epitomized in a humanities and social sciences approach (see Sørensen 2017). In here, ANTHROPOLOGY is key:

Archaeology's integration into anthropology, particularly the four-field approach that is taught at

North American universities, underscores a holistic understanding of human societies and their evolution (Figure 3). While European anthropology often leans on folklore and ethnography, the US approach emphasizes a comprehensive examination of human existence through four interconnected fields: cultural anthropology, physical anthropology, linguistics, and archaeology.

Archaeology, as one of these four fields, delves into the material culture of past societies to unravel the social and cultural aspects of their existence. It provides a tangible link to human history, offering insights into the evolution of societies, technological advancements, and the development of complex cultural systems. The integration of genetics into anthropological archaeology is transformative. Instead of solely focusing on population genetics, this approach explores kinship and the interplay between ancient and modern genetics. By examining DNA, researchers can reconstruct family relationships, migration patterns, and the genet-

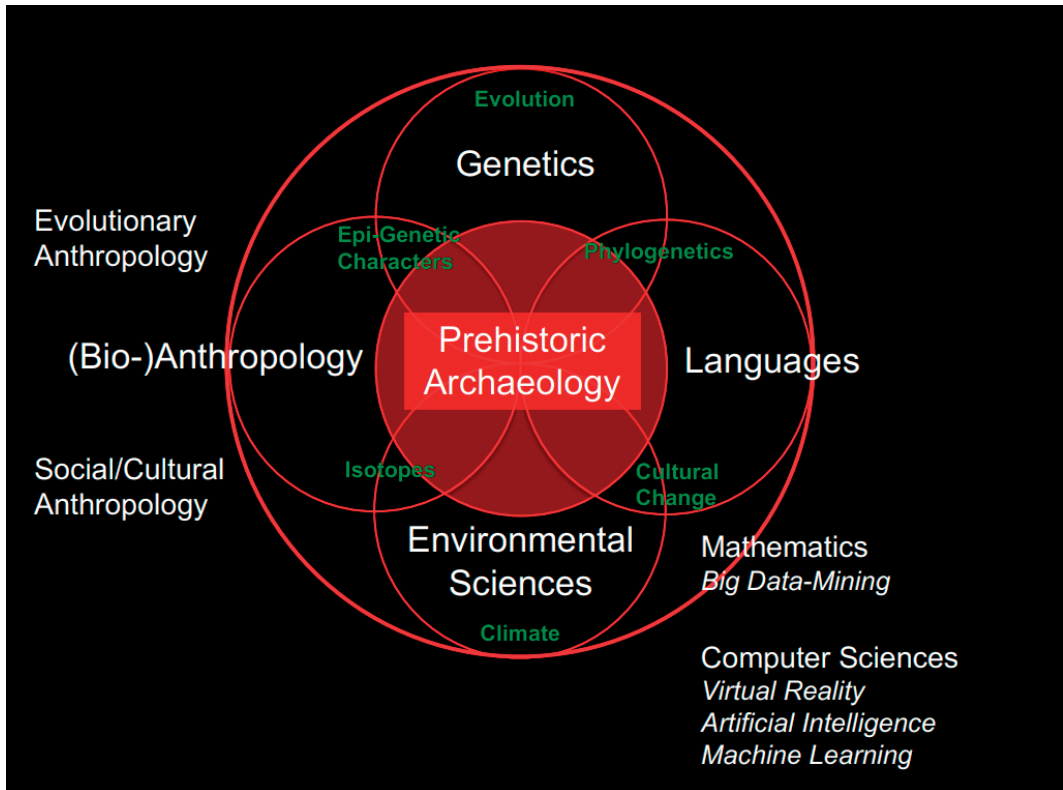


Figure 2. Prehistoric archaeology of the 21st century at the crossroads of many other disciplines, both scientific and humanistic, and methods and techniques. Scheme out of the ERC YMPACT project. Image credit: Volker Heyd.

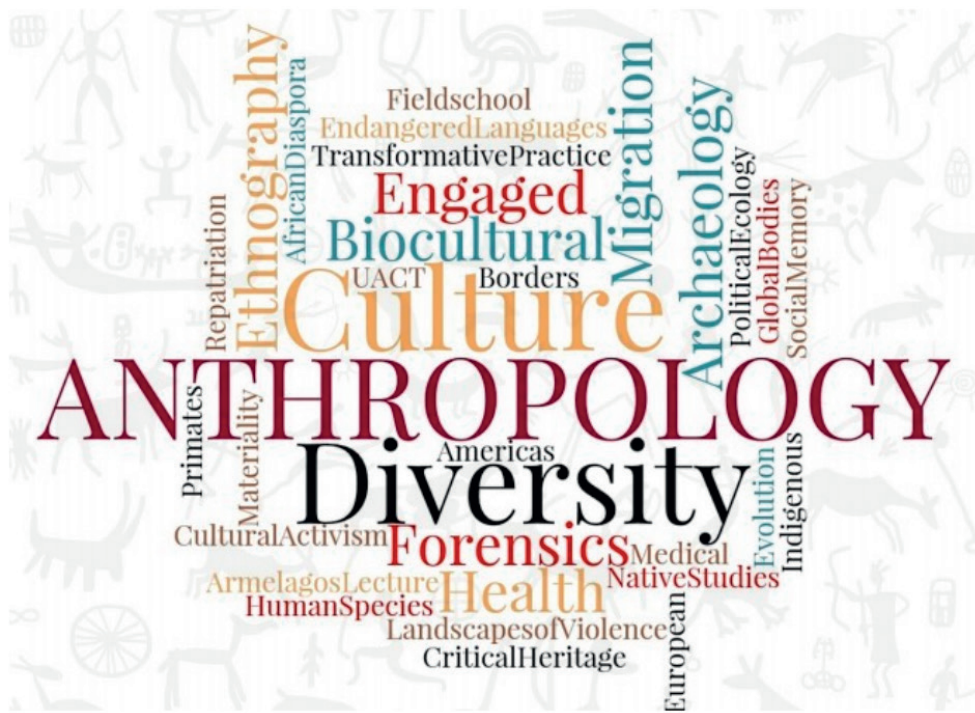


Figure 3. Network graph of the US four-field anthropology approach. Image Credit: <https://scholarworks.umass.edu/anthro/>.

ic heritage of ancient populations. This opens new avenues for understanding how genes influenced cultural practices and social structures.

In essence, anthropological archaeology in the US embraces a multidisciplinary approach that combines the study of material culture with genetics to provide a more comprehensive understanding of human history and evolution. It bridges the gap between the tangible artifacts of the past and the genetic legacy that continues to shape our understanding of humanity. Or take it in the context of a latest exhibition on German archaeology ('Bewegte Zeiten. Archäologie in Deutschland') at the Gropius Bau in Berlin on 21 September 2018–6 January 2019. The sections were no longer the classical Stone Age, Bronze Age, Iron Age, Romans, and medieval archaeology, but pure anthropological topics like 'Mobility', 'Conflict', 'Exchange' and 'Innovation.'

One could now express a 'Welcome!' to the 21st century! And in an anthropological archaeology. However, perhaps this dichotomy of Sciences versus Humanities is already outdated

and there is another development on the rise, even more powerful than the directions of Sciences and Humanities.

Welcome to the ANTHROPOCENE!

Archaeology plays a pivotal role in the ongoing discussion about the Anthropocene, a proposed geological epoch characterized by the significant and lasting impact of human activities on the Earth's systems (Figure 4). This epoch is thought to have commenced roughly 10,000 to 12,000 years ago, coinciding with the advent of agriculture and the Neolithic Revolution.

Archaeological evidence is crucial in defining and understanding the Anthropocene's beginning because it provides insights into the transformation of human societies from nomadic hunter-gatherers to settled farmers. This transition marked a profound shift in human interactions with the environment. Archaeologists examine ancient settlements, tools, and agricultural practices to trace the development of farming and its con-

sequences. The human footprint, encompassing farming practices, livestock domestication, and deforestation, dramatically altered landscapes and initiated sedimentation in river valleys. Archaeological excavations reveal sedimentary layers with clear markers of human activity, such as pottery shards and agricultural implements, serving as geological evidence of human influence. Moreover, the shift from hunting and gathering to agriculture led to the loss of biodiversity and megafauna extinction, a topic of intense archaeological investigation. Archaeologists study ancient diets, plant and animal remains, and food storage practices to understand how this transition impacted food sources and ecosystems.

In summary, archaeology provides tangible evidence of humanity's transformation of the environment and its role in shaping the Anthropocene epoch. By examining the archaeological record, we gain valuable insights into the profound consequences of agricultural development, including changes in food sources, sedimentation, biodiversity loss, and megafauna extinction that continue to shape our world today.

Archaeology is doubtlessly a discipline in its own right, more than 150 years old, with its own methodologies and techniques. Archaeology, and here prehistory in particular, is also and will always

be, a discipline in-between the natural sciences and the humanities / social sciences, including history. Right now, we think we are facing an exciting period of transition and new orientation, perhaps a kind of threshold for the future. Scientific innovations and new discoveries are massively tying in, pulling us altogether into a more scientific direction. This has several positive aspects, outweighing any negative connotation: We will much more employ teamwork; it enhances our visibility in press and politics; heightens our grant successes; and lets us publish in prestigious, pure scientific journals.

However, it also raises questions of, and we cite here the senior American archaeologist Ruth Tringham (2018), 'who sets research agendas, dissemination of archaeological knowledge, multi-scalar interpretation of archaeological data, celebrating the ambiguity of the archaeological record, and putting the dialogic nature of archaeological research into practice as the dominant form of its dissemination.' Likewise, a rebalancing is underway on the humanities' side, as it happened already twice in the past of our discipline. Again, this is nothing to be afraid of. It is actually a sign of a vital discipline. We also feel the need to build up a kind of more humanistic methodology to deal with the challenges that particularly come with ancient DNA results.



Figure 4. A footprint of the American astronaut Edwin Aldrin of the Apollo 11 mission on lunar soil, July 1969. Photo: National Gallery of Art, Washington (Creative Commons Zero, CCO).

Not yet fully evaluated is the ongoing impact of the concept of the Anthropocene. It is really bringing science and humanities closer together because the distinction between nature and culture is loosened through the definition of the last 75, 250, or even 12,000 years as man-made. Archaeology will be perfectly positioned to collaborate with both sides. And the interaction of past societies and their human beings with their environment anyway stands at the heart of one of our key subdisciplines: Remember landscape archaeology? No matter what, there is one point that cannot be highlighted enough: Archaeology is deeply inter-, cross-, and transdisciplinary, and this is good. And no worries, it will also be so in the further course of the 21st century.

Archaeology at the University of Helsinki

A different story emerges when one attempts to translate international methodological and ideological developments over a prolonged period of circa 150 years into the microcosm of a single institution. Here, discussions will only occasionally deal with the multiplicity of directions, whether sciences, anthropology or the Anthropocene, and which one will prevail in an international competition of ideas. Rather, issues about corporate identity and one's own position compared to contenders is more of the daily business in a set of rather diverse scholars.

During my own appointment at the University of Helsinki in 2018, VH was tasked by the faculty to submit a strategic vision on the development of the discipline and where he sees *Archaeology@Helsinki* now, in 5, and in 10 years. What follows is the exact document written in early June 2018.

Professor Volker Heyd – *Where I see the section of archaeology at the University of Helsinki in 5 and 10 Years. A strategic vision*

1. Taking Stock

Finland has three universities in which archaeology is being taught and researched as a discipline. Be-

sides Helsinki, these are Oulu and Turku. In each of the three universities the section of archaeology is quite small, being one professor, two to three permanent staff members as either lecturer, instructor, and/or technician, and a handful of docents and/or postdocs on temporary contracts of either teaching or research. Two of the three professors, V.-P. Herva in Oulu and V. Immonen in Turku were recently appointed, are mid-aged, and will probably serve for another 20 years. In all three universities, archaeology is not representing an independent unit, but rather forms part of larger, school/ or department-like superstructures. In Turku, this has traditionally been the Department of History, while in Oulu archaeology is bound to cultural anthropology.

In Helsinki, the section of archaeology is now part of the newly formed Department of Cultures. Besides the professor, M. Lavento, recently on sabbatical as well as sick leave, there are currently in permanent positions one university lecturer (A. Lahelma), one instructor (W. Perttola), and one technician (E. Holmqvist, just appointed). A maritime archaeologist is in the process of being appointed and can soon be added to this list. A Professor of Cultural Heritage, also to be appointed soon, will however be shared with other sections/disciplines. Besides, the section has several docents and externally funded postdocs, as well as around 20–30 PhD students (most of these remain, however, invisible). Several more archaeologists, often in permanent positions, are distributed across the Faculty of Arts. They cover further aspects of archaeology, such as Near Eastern, Classical and Biblical Archaeology, while being in sections that are not necessarily having the name of archaeology in their title. This helps to create a healthy community of mind-likes. Traditionally, the section of archaeology in Helsinki has strong links with the disciplines of linguistics, folklore, and history. Outside the faculty, a well-established network is in existence with environmental (e.g., palynology, palaeoclimatology) and biological sciences (e.g., osteology, genetics), as well as the Museovirasto (Finnish Heritage Agency) and several museums in and around Helsinki, notably the National Museum.

2. Recent successes, but some long-standing problems, too

This network has particularly paid out in the last university-wide research evaluation some years ago in which the section fared quite well, being one of the strongest in the faculty, then resulting in a reward of more than 50,000 €. Also, a major grant has been awarded to Dr A. Lahelma, as part of the Academy of Finland Centre of Excellence (CoE) in Ancient Near Eastern Empires, and this success is also thanks to good relations with other archaeologists and ancient historians in the faculty. To add is the freshly awarded Visiting International Research Professorship for myself, in cooperation with A. Lahelma, resulting in, for example, the appointment of another 3-year postdoc. Further strengths lie in the remote sensing and prospection activities of the section as part of their expanding Archaeo-Lab, as well as in an increasing contribution to the 'Digital Humanities' initiative of the faculty.

Besides this positive outlook, some downsides also need to be mentioned. Publishing still happens too often regionally and instead of aiming high internationally, one goes straight to safe local journals. There is also no recent Academy of Finland standard grant success for the section, except for postdocs applying for their own jobs (and being quite successful in such). The visibility outside of Finland is rather mediocre when talking with colleagues from Scandinavia and beyond. For example, there is no foreign PhD student and/or postdoc, the section hosted no major conference recently, and never organized a 'Dialogues with the Past' event despite being part of it for over 10 years and therefore being fully funded externally.

3. Where should we be in 5 years?

The above-described traditional links of Helsinki, Oulu and Turku, but also their geographical locations within Finland, destine them to a kind of 'expertise-related partition.' After having talked with several colleagues, many of them from outside institutions like Museovirasto or the National Museum, it seems this view is also in support of government ministries. In such, Oulu should be looking out for Lapland and the Arctic regions and focusing on contemporary archaeology (20th

and 21st centuries) and social/cultural anthropology. Turku is geographically and historically closely linked with Sweden and should therefore pursue more of a medieval and historical archaeology. This leaves Helsinki connecting with Russia and the Baltic countries, while also being the international showcase of Finnish archaeology, such as with Near/Middle East archaeology or the Finnish Institutes in Athens (the current director is an archaeologist from Helsinki) and Rome (the vice-director is another Helsinki archaeologist). In terms of periods and methodology, this would predestine the section with prehistory (Mesolithic to Iron Age) as well as modern interdisciplinary and scientific archaeological approaches, being their traditional playgrounds anyway. However, a healthy overlap will be seen positively and indeed desired.

What does this mean for us in the section for archaeology in the next 5 years? A: Becoming more internationally visible and thinking more in a European than just Finnish scale. This comprises attracting students and scholars alike from across Europe, making the section a vivid place to conduct research, as well as taking part in international network projects and conferences. Here, my own ERC Advanced Grant success can tie in, as well as my established international links. It also means to encourage further European applications and helping Helsinki colleagues in receiving such grants (as with K. Mannermaa who is now shortlisted for an ERC Starter Grant). B: Enhancing the role of Finnish archaeology, and Helsinki in particular, of being the gateway to Russia. This includes initiating student exchanges and forging further collaborations with Russian scholars, inviting more of them to come for lectures or research stays, and creating the infrastructure for such. It also implies working more with Russian sites and materials and offering our expertise for collaborations. The same should of course apply for the Baltic countries, or even Belarus and Poland. C: Building up stronger bonds with Kumpula and Viikki. We are already enjoying good links; however, these are rather confined to a handful of people. This limitation needs to be widened, as there are potentially more scholars researching topics that can potentially have huge benefits for archaeology; however, without knowing of each other. This plan would lead to further joint research projects, finally getting an Academy

of Finland standard grant for the section, or co-supervisions of PhD students and postdocs. Also, applying jointly for the next FIRI infrastructure call will have many mutual advantages. D. Considering a specifically close collaboration with genetics, anthropology, environmental and geosciences, and linguistics as our natural allies when it comes to understanding past human action and interaction, and carefully preparing over a longer period a joint application for a CoE grant. E. Not neglecting however, we still have an obligation to museum- and heritage-related teaching and subsequent student formation. This is where the jobs will be for many of our students.

4. Where might we be in 10 years?

Discussion and initial selection are underway for the creation of a Finnish Research Institute for the 'Human Past in Northeastern Europe'. This is a long-term project and cannot be shouldered by one university alone, let alone one faculty. Also, the financial support of as many as possible NGO funders, such as Erkko, Kone, Wihuri, Kulttuurirahasto, etc., and the backing by some governmental ministries will be needed to realize this vision. If successful, this would however propel archaeology, and the other disciplines involved, into an area of expertise and competitiveness that is only matched by Europe's big countries or the United States. Perhaps the granting of a CoE might widely be seen as the start for such an institute.

At last, as this strategic vision has mostly focused on research, its collaborations and competitiveness, let me allow a few words on teaching and student formation. The section of archaeology always had, over the last two decades, a healthy number of undergraduate and master's students, leading many to start and complete PhDs with a fine publication outcome. Many more have found good jobs, either within or outside archaeology. Now we face a period of higher intra-faculty/-department competition for students. This is positive. However, archaeology needs to react and adapt its curriculum to make the discipline more attractive and secure its fair numbers of students. While the archaeology of Finland should always be in the center, I think it will also be necessary to widen our scope to deal with other regions, Russia, Baltic countries, Scandi-

navia, and Europe as a whole. Also, the new world of interdisciplinarity needs to be better reflected, and basic scientific methods and techniques included, as well as research-based courses offered. In the same way, practical sessions, internships, excursions, and lab and fieldwork need to find their place. I for myself have made good experiences with team-taught courses in which everyone can bring in their own expertise.

A future for archaeology in Helsinki: Concluding remarks

Five years later, not every prediction became true and some of the basics have also changed. Visa Immonen is no longer professor of archaeology in Turku, and the institution is in the process of appointing a new professor. Oulu has got a second professor with Anna-Kaisa Salmi, and Helsinki has now also two associate professors in Kristiina Mannermaa and Kristin Ilves. Overall, archaeology disciplines have enlarged, no matter if in Turku, Oulu, or Helsinki. Much enlarged have also research grant income figures. For Helsinki, it is estimated in the range of 6–7 million € for the last five years, not including Antti Lahelma's and VH's deputyships in the ANEE Centre of Excellency project and the Fin-Tims FIRI consortium, respectively, both funded by the Academy of Finland. This is much higher than ever anticipated and forms an economic basis for a solid research infrastructure. With only seven permanent or tenure-track staff members, this means that virtually everyone has a major grant. What has also increased is reaching out of the academic and professional archaeologists' circles and into the wider public, thus creating a robust societal impact. While there is not yet quantifiable data of the impact available, and thus comparison with other institutions is not easily possible, frequent visibility in national and international press and media, and constant updates in various forms of social media about research results and events, are a good indicator of a generally high impact. So, overall, the last five years were a success story.

But the downsides of this economic and impact-based way of handling academic disciplines are easily recognizable, and were summarized in an article from June 2023 in the German newspaper

Die Welt: ‘...this is the result of an economized concept of education that wants to quantify everything, that relies on quick ‘impact’ instead of depth of reflection, that prefers to collect performance points instead of looking for intrinsic motivation, and that systematically promotes the destruction of the humanistic educational tradition.’ Again, it is about the right balancing between the pure economic and impact aspects of research and keeping a certain level of academic freedom to pursue equally excellent but unfunded research, that matters.

Another positive aspect, partially due to the grant successes and related investment into archaeological researcher positions, both at PhD and postdoc/researcher levels, is a process of internationalization that is currently underway in Archaeology@Helsinki. Staff have, besides most Finnish passports, those of Germany and Estonia; postdocs/researchers are from Finland, Greece, Italy, Latvia, Romania, and Spain/USA, and funded PhDs from Finland, Germany, Russia, and Sweden, topped up with visitors from many more countries. Consequently, English has become quite often the language for the daily business in the archaeology corridor at Topelia. One can find this a good or a bad development, and there are good arguments for both. One good aspect certainly lies in the constant practicing of English, being nowadays the language of nearly all funding applications, no matter if domestic, EU, or wider Europe, as well as of most publications. That cannot be bad.

In consequence, methodological and ideological diversification in the archaeology of the third decade of the 21st century goes along another line of diversification, that of the people running the show at Archaeology@Helsinki. This is maybe one of the secrets for the above-described successes. But there is another aspect to be considered in Helsinki: Despite quite few staff in permanent and tenure-track positions, there is a large and solid body of – mostly Finnish – docents and postdocs/researchers, complemented by a vivid PhD community. They produce the bulk of the research output, not only in the form of books and articles, but also as lectures, lecture series, sessions and conferences, and international interaction. Especially the move towards article-based PhD dissertations, followed by most of our PhD students, publishing the usually four articles in international, peer-reviewed, open-

access journals, has multiplied output and created more international visibility and reputation. Publishing our quite often excellent MA theses should follow suit.

But *Archaeology@Helsinki* currently faces many challenges, too. We still feel the effects of the Covid pandemic of 2020–2021 in our student relations, the stupid Ukraine invasion by Russia has cut us off from a good chunk of our primary research regions, and there is, as always, the issue of money and funding, and of staff, postdoctoral and PhD positions. Despite being rather small, we are well-placed and respected in our Faculty of Arts due to our excellent grant income, output, and visibility. But the academic world around us is becoming ever-more competitive and it is not for granted that our ‘small but sexy’ image can be maintained. The future brings even more challenges. Artificial Intelligence will not only transform the academic environment but archaeology itself, Russia will stay a pariah country for a long time, funding levels and student figures remain volatile, and whether a move to incorporate more natural sciences is a good thing or not, is not written in the stars.

But let’s have a positive attitude. We are pretty sure there will still be a flourishing *Archaeology@Helsinki* in the near and far future, and, no doubt, there will be other generations of archaeologists who can then celebrate 150 and 200 years of Archaeology at the University of Helsinki.

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