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Practice of academic and applicative archaeology in Slovenia from a social epistemological perspective

Introduction

In his pioneering study *Ideology and Utopia* (1936), Karl Mannheim defined the object of his research as how thinking actually functions in public life as an instrument of collective action. He argued that some modes of thought cannot be adequately understood as long as their social origins are obscured; knowledge has to be comprehended in the concrete setting of a historical-social situation, out of which individually differentiated thoughts emerge (Mannheim, 1936, 1–3). In its present sense, social epistemology started to develop in the 1950s, with the growing dissatisfaction with orthodox theories of science deriving from analytical philosophy, and notions of objective and neutral knowledge. After an influential critique by anti-empiricists (e.g. Quine, 1951; Hanson, 1958), the philosophy of science gradually accepted that the division between the empirical (observational) and theoretical worlds is blurred and that both cannot be fully comprehended without including social, cultural, and even cognitive or psychological perspectives. These lines of thought could be traced at least from Thomas Kuhn, Michel Foucault, Paul Feyerabend, and Richard Rorty, to name just a few of the most prominent critics of neutral science. For Kuhn (1962), the paradigms ultimately change in the interplay of social factors in the scientific community, Foucault (1966) considered knowledge as a product (i.e. constructed) by power structures, Feyerabend (1975) advocated theoretical pluralism against the monopole of the dominant paradigm and necessary consideration of social and historical factors in knowledge creation, while Rorty (e.g. 1979, 170) replaced the traditional notion of accurate and objective knowledge with that of the knowledge as "justified belief", a central concept in modern social epistemology.

Accepting that knowledge is justified according to the standards of a particular social group moves the focus of social epistemology from what was called "individual epistemology" (knowledge is something that the cognitive agents individually achieve) to knowledge achieved and justified through other agents (Goldman, 1999,

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4; 2019). One individual agent cannot avoid forming his or her knowledge without the knowledge communicated by other agents. These ideas opened the doors to relativism, something that traditional analytical epistemology attempted to avoid, but for social epistemology relativism is an inevitable feature of knowledge justification (Plakias, 2020, 47).

According to Goldman and O'Connor (2019), the object of this discipline is primarily the research of social-epistemic activities that have an impact on epistemic outcomes. His list of the principal topics gives a fairly good idea about current social epistemology: a) How an individual seeks to determine the truth-value of a certain proposition by soliciting the opinions of others (*testimony*); b) How, if at all, an agent should adjust his or her initial belief about the specified proposition upon learning that his or her peer holds a contrary position (*peer disagreement*); c) What it takes for a group to believe something (*epistemology of collective agents*); d) How a group belief is aggregated from individual beliefs (*judgment aggregation*); e) How a group can achieve an epistemic status and proceed from belief to justified knowledge (*group justification*)' and f) How one can identify other individuals as sources of accurate information (*identifying experts*). The list is extensive but not exclusive.

Towards social epistemology in archaeology

Here we will give only a brief and generalized overview of epistemological approaches in archaeology.[1] Most theoretical and epistemological endeavours in archaeology until the 1950s were mostly limited to improving archaeological methods and rules to achieve, for example, better chronological and typological classifications, as well as field recording. Early archaeology firmly insisted on the humanistic (historical) interpretation, using almost exclusively the idealist philosophy of history and material culture. Before the 1950s there were not many works that explored epistemological issues. Trigger (1998, 2–3) stresses the pioneering role of Robin Collingwood and his book *Idea of History* (1946). For Collingwood, understanding the past is about understanding the intentions behind human action; the past event or action stays locked in the past, but the intention transcends the time gap. What is left to a researcher is a re-enactment based on the best possible knowledge of the past circumstances that conditioned the intention. However, Collingwood's ideas did not take deeper root in archaeology since we could not find any explicit reference to his epistemology and metaphysics until the late 1980s. Even van der Dussen (2018) and Leach (2018), who contributed more in-depth analysis of Collingwood's philosophical and metaphysical thoughts on history, anthropology, and archaeology did not provide satisfactory answers to why Collingwood was absent in archaeology until the late 1980s when it

1 For more on this topic see the paper of Staša Babić in this issue of Ars & Humanitas.

re-appeared in the postprocessualist context (see in Hodder, 1986, 90–99), and even here more as a predecessor of some postprocessualist ideas. Reasons for this should be probably looked at in the archaeologists' poor knowledge of philosophy, increasing interest in the technical competence of archaeology, and, last but not least, in increasing importance of archaeology in creating national pasts and narratives, which needed concrete reminders of the nation's past. One may say that where Collingwood was explicit, most archaeologists remained implicit.

Trigger, however, ignored some important achievements in the Central European archaeology. Albert Kiekebusch (1928, 115, 117), the leading scholar in German settlement archaeology before the 1950s, saw the research goal of settlement archaeology as the production of cultural-historical statements about human life that can only be the approximations (*Wahrscheinlichkeitsaussagen*) which can be achieved with inductive empirical research aimed at the reconstruction of past settlement processes and structures. Though Kiekebusch did not provide any particularly new ideas on archaeological epistemology, he nevertheless, attemted to characterize and systemize archaeological ways of obtaining knowledge in a wider domain of historical thinking. However, it is also symptomatic for archaeology of the first half of the 20th century that neither Collingwood's nor Kiekebusch's ideas have been widely accepted; most archaeologists simply did not find theoretical explorations highly relevant in their practice.

In the 1950s and 1960s, epistemological issues in archaeology came to the front. In 1962, the journal Current Anthropology, published the keynote paper by Gordon Lowther, entitled Epistemology and Archaeological Theory, which was commented on by several scholars, (e.g. Julian Steward, Glyn Daniel, Gordon Willey, and Albert Spaulding). Lowther's central topic is the truth of archaeological statements and how it can be verified. He analysed the potential of the correspondence and coherence theories of truth in archaeological reasoning. The main problem he saw was that archaeologists use presuppositions which became considered »facts« leading to a chain of statements derived from poorly verified or hard-to-verify statements (Lowther, 1962, 499). For him, neither of the theories of truth in archaeology, can fully meet the criteria for verification. Lowther finds the correspondence theory adequate only for empirical descriptions of the objects, but there is not much new knowledge there. For him, the coherence theory is potentially more appropriate for statements that are coherently derived from a system of other statements, but, again, also here the propper verification is not possible.

The real epistemological turn emerged in the Anglo-American archaeology with the so-called processualism.[2] Contrary to all previous archaeological traditions, processual archaeology pursued the epistemology of natural sciences. In its most rigid

2 Processual and, later, postprocessual archaeology are paradigmatic approaches that primarily developed in the US and UK, and cannot be fully applied to archaeology in general. In Central European archaeology the traditional culture history archaeology remained in use, as it does today.

version, the American New Archaeology argued for Hempelian nomothetic-deductive reasoning as the only explicitly scientific reasoning in archaeology (see Watson et al., 1971). The underlying presupposition was that human activities are not random but patterned and systematically interconnected with the natural and social environment, transcending so cultural idiosyncracies and time gap. As an important epistemological tool Binford (1977) proposed the middle-range theory which considered archaeological interpretation as, essentially, a sort of analogical reasoning. The middle-range theory served to connect formation of archaeological record with contemporary archaeological observation and higher-level cultural theory. To put it simply, if archaeologists *in vivo* observe processes which create the archaeological record, they can rationally assume (by analogy) that the same processes were at work in case of a structurally and functionally similar past archaeological record.[3]

In the 1980s, another movement emerged in Anglo-American archaeology – postprocessual archaeology – which strongly criticized the epistemology of the processualists. Postprocessualists, despite some differences among them, all shared the idea that only by including context, social aspects, and archaeological practice can the true nature of archaeological knowledge be understood. An archaeologist is not considered an "objective" explainer of the past but a creative producer of narratives about the past. The best illustration of this new movement was Shanks' and Tilley's Appendix in *Social Theory and Archaeology* (1987, 209–213), in which they mapped the so-called *new problematic for archaeology*. In this, the authors deny any abstract and universal rules of archaeological methods, and for them a method is also a stylistic or rhetorical expression of the relation between theory and practice in archaeology. Archaeology, as a social practice, mediates past, present, and future and should be primarily considered in relation to social power. Subjectivity is not a handicap but a powerful arsenal for interpreting the past.

Within the postprocessual movement, but not fully adhering to it, emerged gender archaeology which opened another series of epistemological questions. The most influential critique was that addressed deeply rooted androcentrism in archaeological interpretation and practice. If knowledge, following social epistemology, is justified according to the standards of a particular group, then it is necessary to expose androcentrism in these standards and rethink them anew. A similar position in postprocessual archaeology can be seen for Marxist archaeology. In Western Europe and the US it existed decades before postprocessualism[4], such as in G. Childe's works in the 1930s, and in different ways and forms (e.g. via French structural Marxism) con-

3 "If one accepts observations made on the archaeological record as contemporary facts along with the idea that such facts are static, then clearly basic problems for the archaeologist include (a) how we get from contemporary facts to statements about the past, and (b) how we convert the observationally static facts of the archaeological record to statements of dynamics." (Binford, 1977, 6)

4 For a historical overview of Marxist archaeology in the US, Latin America, and Europe see McGuire (1993), and Trigger (1993).

tinued as a relatively marginal force until the onset of postprocessualism, when, due to postprocessualist sympathies for social issues, it gained more ground.[5] In addition to this, within or alongside postprocessualism there existed, and still exist, several other approaches which have contributed differently to the discussion on epistemology and theory, but remained somehow less common in this ongoing debate (e.g. phenomenology, poststructuralism, and object-oriented ontology).[6]

An attempt at social epistemology from practice: The case of the academic and field professional communities in Slovene archaeology

The tradition of theoretical thought in Slovene archaeology is not very long, and its production is still modest except for research in the history of the discipline. At present, there are only a few papers that do not explicitly deal with social epistemology but include some of its elements (e.g. Novaković, 2019a; Novaković, 2019b; Lorber et al., 2020).

This paper is the first attempt to reflect on the transformation of Slovene archaeology triggered by the introduction of the new concept of preventive archaeology in the 2000s. The transformation began in the mid-1990s, catalysed by the extensive construction of motorways which created completely new circumstances for heritage protection in general and for the archaeological profession in particular. Due to legislative changes that required compulsory archaeological research prior to development projects, the number of "rescue" projects greatly increased in number and size, creating in a relatively short time at least 30% of new jobs compared to before the 1990s, predominantly in a commercial setting. In the last decade, there were between 500 and 600 field projects per year, which is an increase of an order of magnitude compared to some 30 years ago. It is also important to note that some 95% of all projects are in the context of heritage protection and not motivated by academic goals.

One of the most visible consequences of this transformation was the accentuated distinction between two archaeological groups of researchers, academic archaeologists, and professionals working in applied in the heritage protection sector, mostly field researchers working in the commercial setting.[7] In the abbreviated form, we will name these groups as academic and (field) professional archaeologists. There is also the third distinctive group

5 Due to limited length of paper we could not discuss Marxism in the archaeology of the Soviet Union and countries of the Eastern Bloc after WW2.

6 See e.g. Holtorf et al. (2000); Bapty et al. (1990); Olsen 2010.

7 For the purpose of this text we have simplified this distinction. In general, academic archaeologists come from public institutions, universities, and research institutes and from some larger museums with their own research units. In contrast, most field professionals are organized in private enterprises. While some academic institutions may also be occasionally engaged in heritage protection field projects this is not their primary task.

which we have called the archaeologists-conservators, experts in public service responsible for the implementation of the heritage protection program who prescribe obligatory 'heritage protection conditions' for all archaeological field projects in Slovenia and monitor their implementation. Because of their specific role in the archaeological practice and a relatively small number (ca. 15 experts), we have omitted them in our paper. However, their role in knowledge production is also highly important and deserves a special study.

To reflect some principal epistemic consequences of the existence of the said two groups, we have roughly followed the model of observation proposed by Susan Wagenknecht (2016) in her study of research groups as the most common form of collaborative creation of scientific knowledge. The principal topic of her work is epistemic dependence between the agents involved in knowledge creation processes, and how the organization of work, communication, labour and responsibilities division are constructed to provide that scientists came to trust one another (Wagenknecht, 2016, 2). Wagenknecht define research groups as formally organized and closely collaborated scientists. Our two groups do not fully correspond to her definition definition, but we still find her research approach very useful and inspiring. We could not equally explore all aspects Wagenknecht studied, but we have focused on those which we find most relevant for our case: a) research freedom, b) nature of research, c) internal organization of labor, d) epistemic dependence and asymmetry.

Research freedom

While academics are relatively free to choose their field research topics and methods, field professionals, in most cases, undertake their research on places and objects determined 'from outside' – those directly endangered by development. Academic researchers pursue research motives and goals that they themselves define, and organize projects in circumstances and conditions over which they have better control (time and duration of projects, selected sites, adequate staffing, etc.). The professionals have much less freedom in doing this. Their work is largely prescribed and/or limited by a series of regulations and standards issued by the Ministry of Culture, which is responsible for the protection of cultural heritage.[8] Field professionals can rarely decide about the place of research, dimensions of the project, and time of project execution, and they have to use methods and recording systems prescribed by the state authority. The same regulations are also pertinent to academic fieldwork research, but academics can freely add additional aspects besides those required by the regulations.

8 The basic document defining the prescribed requirements is Pravilnik o arheoloških raziskavah (Pravilnik (2013) and its amended version from 2022) [Regulations for Archaeological research], including the Appendices on research standards, recording procedures, methods, archiving the data, obligatory references for project leaders, etc., issued by the Ministry of Culture.

Funding is another aspect that limits the field professionals in pursuing more research-oriented topics. While academics have much greater freedom within their budgets, field professionals are required to more or less strictly follow the contractual agreements and parameters in permits. Furthermore, since professionals (mostly private enterprises) have to compete in the market, they have to strive for cost-effectiveness to satisfy the prescribed requirements and earn some profit. In competing for funding, academics need to demonstrate research excellence, well-recognized results from their previous research, and good ideas. For field professionals, other aspects have priority: low costs, cost-effectiveness, previous business portfolio, staff and equipment capacities, and good standing record with the authority that issues permits.[9] However, the important limiting factor for academic research is modest funding of field projects. Individual development projects can sometimes exceed € 1 million, while fieldwork campaigns in academic research, by a rule of thumb, rarely go over €15,000.

Nature of research

In the archaeological community, field professionals' work is commonly seen as an expert technical service and not proper research.[10] We have argued that this is a false view and that archaeological field work is an equally creative scientific and knowledge-obtaining process regardless of the motive for its undertaking and organizational context (Novaković 2019). Since 95% of all archaeological fieldwork – the major contributor of new data – derives from development-led projects, it would be nonsensical not to acknowledge their contribution to our understanding of the past, especially because the data was collected with the same scientific methods and standards.

However, it would also be wrong to ignore the distinction between "science" and "expert service" in the everyday practice of archaeology in Slovenia, as a division between, to put it colloquially, "thinkers" and "doers". Such a perception is additionally reinforced through the public image of both, as while scientific archaeology is generally positively promoted, development-led archaeology is frequently seen as a necessary evil in the process of spatial development (Novaković, 2019). The differences in the research of the two groups are not hierarchical but complementary. The academic knowledge could be described as motivated by scientific curiosity and our need to understand the past, while the knowledge produced by development-led archaeology

9 In the case of a public developer (e.g. state, municipality, or other public entities), the tenders have to follow the Law of Public Procurement, where the lowest price frequently carries the largest weight. Private developers look for the lowest price.

10 The Law on the Protection of Cultural Heritage considers all archaeological field works as research, and makes no difference of the context (academic, development-led, rescue). For all researches public interest have to be clearly demonstrated. However, in practice is still largely maintained the distinction between "proper" academic research (with the pursuit of new knowledge about the past) and preventive or rescue projects as expert services in the context of heritage protection.

could be seen as applied or intermediate knowledge, where theory and practice interact closely through concrete results (Hannibalson, 1999, 214)

Among the first who warned about the problems arising from the division between the thinkers and doers in archaeology was Richard Bradley (2006), who spoke of two cultures in archaeological practice in the U.K., technical and descriptive, which serves the needs of heritage protection, and academic, interpretative and research-oriented. While the former cherishes observation, recording, and documentation as high technical skills much needed in the modern development-led milieu, the latter attempts to understand past human behaviour and culture (Bradley, 2006, 3). For Bradley, this distinction is real, but harmful to archaeology in the long run.

What are the epistemic outcomes of having two distinctive groups? Keeping the distinction between knowledge producers and knowledge appliers (or data providers) indicated a poor understanding of the relationship between knowledge and practice. According to Kincheloe (2011): "*A scholarly, rigorously educated, reflective practitioner possesses the ability to restructure her conceptual framing of a situation not only at the micro-level as it involves rethinking a technique but also at the meso- and macro-level.*"

In fact, both groups work on basic[11] and applied research (and knowledge) simultaneously. In academic research, it is very common that non-archaeological experts provide their expertise (e.g. plant remains analyses, sedimentological analyses, etc.) without being more deeply involved in the project. In many cases, this expertise is outsourced (e.g. radiocarbon dating). In other words, they provide applied knowledge developed in other disciplines. On the other hand, despite strictly prescribed types of work, field professionals must still pose a series of 'basic scientific' questions and find proper answers to contextualize their results not only in the frame of heritage protection but also in the frame of archaeology and its 'basic' knowledge. Not only do professional archaeologists use the same methods and techniques for data retrieval, processing, and interpretation but they have to design and run the whole project as it is aimed for academic research but adapted to particular contractual and legislative conditions.

The knowledge produced in both groups may differ in content, perspectives of observations, and motives, but it is complementary also in another aspect: academic researchers select the sites, research methods, and optimal teams best suited for

11 We have used the term basic (research) following the typology of the Slovenian Research and Innovation Agency, the principal funder of academic research in Slovenia. Basic projects cover experimental or theoretical research undertaken primarily to acquire new knowledge of the underlying foundations of phenomena and observable facts. Applied projects represent an original investigation undertaken in order to acquire new knowledge. It is however, directed towards a specific practical aim or objective (https://www.arrs.si/en/progproj/rproj/predstavitev.asp). The agency finances both types of research projects but not the preventive archaeological projects.

their research idea, while professional archaeologists have to come to the best possible knowledge about the site to be researched. In the first case, the theory looks for the best empirical content, while in the second, the empirical content looks for the best theory. The question is whether all parties are aware of this.

Organization of research work and projects

The majority of the archaeological academic projects in Slovenia are, in essence, individual. It is very common that individual archaeologists are the only full researchers in a particular project and can *ad hoc* gather a smaller group of assistants for technical or other support. Since the projects are very personalized, the coordination with other experts or collaborators is less demanding. Moreover, their peers are, generally, leaders of other individual projects.[12]

On the other hand, the organization of the professional groups is more hierarchical. At the top of the organizational hierarchy, there is an owner of the enterprise or director of the institution, followed by the director of the research project, assistant archaeologists, technicians, and workers (e.g. non-archaeological staff for assistance in digging). An important reason for a more hierarchical structure is the size of the projects, which are frequently much larger and logistically more demanding than academic field projects. They require more coordination and efficiency in executing tasks and a more detailed division of labour. While responsibility in the academic project is normally on the (individual) researcher, who is a central point where all information is concentrated, in larger projects executed by the professional group the responsibilities, due to a chain of specialized tasks, are more dispersed but based on the level of expertise. However, the project director has a pivotal role in this context.

The responsibility towards the parties outside the project group is very different for both groups. Academic researchers, in terms of knowledge obtained and its quality, are more loosely responsible to the funder (e.g. national research agency or some EU agencies). In most cases these agencies directly monitor the formal execution (i.e. business side) of the projects and not so much the actual results (i.e. new knowledge). The scientific knowledge is evaluated through a much longer process of peer review and academic acknowledgment. In contrast, archaeologists in professional groups are constantly monitored by developers (funders) with regard to financial and other contractual aspects, and by the Institute for the Protection of Cultural Heritage for quality control of archaeological works. In the case of larger excavations, a quality control

12 Admittedly, this is a very generalized and simplified observation. Also, within the academic group there are more closely structured research teams composed of senior and junior researchers, research assistants, and other staff, but such projects are not as frequent as individual projects.

system requires a peer review (by academic researchers mostly) of their reports.

The different organizational complexity of academic and professional projects also results in different epistemic consequences. One important difference is the goals of the research. We have already said that academics design and undertake their projects relatively freely, with the aim of contributing their best to the stock of basic knowledge, while the professionals are much more limited in their endeavours. The first threshold they must reach is defined by the general goals of heritage protection policy and particular goals defined in the Cultural Heritage Protection Conditions issued by the Institute for the Protection of Cultural Heritage for each individual project. Parallel to this, they also have to respect the contractual agreements with the funding party, which influences much of their work and its organization.

While for academics gaining new basic knowledge is the primary goal, professionals have to pursue different agenda, the one which puts a priority on cost-effectiveness for meeting the contractual obligations and requirements of the heritage protection authority. In other words, they are initially not motivated to undertake research beyond this level. One may say that they are not exploiting the full potential of the particular site, but this would be a very short-sighted argument. They are simply not in a position to approach the basic knowledge in the same way as academics. However, they contribute to it in different ways. The number and size of professional projects is one of them. The thousands of development-led projects carried out in the last decade across Slovenia provide not only a mass of new data, but also a sample of archaeological evidence that could not be obtained by any academic research, and complete excavations of sites, hectares large, can never happen in an academic context.

Let us think of another aspect of professional research – a larger number of unexpected discoveries. Academics plan their research largely based on previous knowledge of the research problem, they select places and objects of research about which they already have some information and have potential for answering the envisaged research problem. In contrast, professional archaeologists generally do not have this possibility. Instead of them, other stakeholders, developers and conservators, decide about places and dimensions of research. But it is a much greater number of professional projects which cause greater quantity of unexpected discoveries, which need to be adequately studied and incorporated in the basic knowledge of archaeology.

Epistemic asymmetry and dependence

To demonstrate the epistemic dependence, we have borrowed the concepts of opaque and translucent dependence from Wagenknecht (2016, 118 – 121). Opaque dependence denotes a situation where one researcher does not possess the expertise to independently carry out certain scientific labour and has to depend on the scientific

knowledge and labour of other researchers, while translucent dependence assumes that the researcher masters the concrete expertise but for mostly pragmatic or organizational reasons this expertise is enacted by their colleagues.

The academic group is frequently seen as a producer of the basic knowledge which is then applied in the works of the professional group. In this sense the professional group tends to believe the academic group and refer or justify their own statements by using those of the academic researchers. On the other hand, since the professional researchers are seen primarily as providers of new empirical data, the academic group also crucially depends on the outcomes of the work of the professional group, and thus that data were collected and recorded according to the agreed methods and interpreted correctly to be transferred to basic knowledge. To this end, the mechanism of quality control was established, such as the academic peer-reviewing of the reports of development-led projects.[13] In general, the interdependence between these two groups is opaque rather than translucent, though there are cases of the latter as well.

The differences regarding the within-the-group epistemic dependences are also very illustrative. If we look at the professional groups first, epistemic dependence is strongly based on the division of labour and specialization. The standard hierarchical scheme is composed of a field project director, senior archaeologists and non-archaeological high-level experts (e.g. experts for animal bones, plant remains, etc.), field technicians, and diggers (frequently non-archaeologists). In general, most senior field archaeologists are experienced and capable of running different field projects. In complex field projects that require a number of senior archaeologists, they normally possess the knowledge for independently running the fieldwork, but divide the work for organizational and logistic reasons. In such projects, the dependence between senior archaeologists is more or less translucent. The exceptions are non-archaeological experts, who normally provide their expertise on some limited aspects of archaeological research, but they do not possess archaeological knowledge for running the projects. In this case, we can speak of opaque dependence acting in both ways. Going down the hierarchy the dependence becomes increasingly more opaque. Junior archaeologists have to increasingly depend on the knowledge and guidance of their senior colleagues, while field technicians and diggers are normally detached from archaeological knowledge and only provide technical or other services without having proper knowledge and information to contextualize the results of their labour.

In the academic group, the research projects are much more heterogeneous, not

13 On the other hand, the Regulations for Archaeological Research require no official peer-reviewing of purely academic projects. If such projects include fieldwork and its subsequent report, the report is approved by the monitoring authority while the peer-reviewing is expected in case of publication in scientific journals or monographs.

only with regard to their content, but also in organizational terms. The research projects are mostly individually designed smaller-scale projects with one researcher occasionally assisted by some technical staff from the same institution or even outsourced staff. Within such projects, it is hard to talk about epistemic dependence within the team (if there is one), apart from the opaque dependence of the researcher on expert knowledge of some analyses. In the case of larger project teams there are two most frequent forms: project teams formed around one more narrowly defined research problem and teams with several different more or less loosely associated research topics. In the first case, the top of the hierarchy occupies a senior researcher who has a pivotal position also in the epistemic sense. The senior researcher makes a research proposal with research goals, methods, budget, logistic plans, and dissemination. Such a position clearly assumes that all the potential risks are addressed to the leading researcher.

There is also another relationship of epistemic dependence, the relationship with the third group of archaeologists, whom we did not include in this paper, state authority experts (archaeologists-conservators from the Institute for the Protection of Cultural Heritage) who prescribe and monitor the works of both groups. Here, we have to introduce another type of dependence – dependence on authority and its knowledge. This is of minor importance for the academic teams, as they just need to satisfy the basic requirements of research permits (if needed). For professional groups, the situation is quite different. Not only because professional projects get many parameters prescribed beforehand, but also the course of the work and final results are much more closely monitored and evaluated. The very prescription of size and methods and respecting other contractual obligations act as powerful determinants of the projects. In this sense, the professionals depend on the prescribing authority that the required parameters of research can be adequately met in the expert, logistical, and organizational senses. But epistemic dependence also acts in the opposite way. State authority for the protection of archaeological heritage depends on the results of the professional projects to adequately integrate them into the wider frame of the archaeological heritage knowledge and their significance in archaeology in general. This dependence is opaque because archaeologists working for the state authority cannot master every kind of project or archaeological problem. The regulations prohibit them from being actively involved, other than monitoring, in projects for which they have prescribed research parameters. The situation is somewhat paradoxical; the prescribers/monitors in general possess less experience (and knowledge) to run field projects, especially excavations, and yet they monitor and evaluate them. In order to secure quality control as a form of securing epistemic

trust,[14] several mechanisms have been introduced (standards, monitoring protocols, post-excavation programs of findings processing,[15] and peer reviewing).

We do not consider epistemic asymmetry as an *a priori* hierarchical relationship depending on intellectual authority and the uneven distribution of knowledge-related resources and division of epistemic labour (see in Hardwig, 1985, 337). In most cases, this would mean that original scientific knowledge is given epistemic priority over applied knowledge. However, in archaeological practice epistemic asymmetries act and counteract in different domains simultaneously and dialectically due to different epistemic dependencies, and destabilize the assumed hierarchical relationship between the basic and applied knowledge, especially because there are no exclusive producers of only one type of knowledge.

However, there are situations and organizational contexts which privilege one group of researchers over another. Most of the academic research in Slovenia is directly or indirectly funded by the Ministry of High Education, Science and Innovation, while the development-led research is in the domain of the Ministry of Culture. In this division of ministerial domains, the academic research has a privileged position in the institutionalized funding of basic research. To obtain research grants for the so-called original scientific projects the researchers must have a PhD, generally must be affiliated with an organization having the official status of a research institution, and their knowledge is most often evaluated on the basis of their scientific bibliography[16] and bibliometric criteria. This system minimizes the possibility of researchers with a career in professional archaeology from obtaining research grants. Their previous works were generally treated as applied research at best, and their field reports not as scientific publications. On the other hand, in the context of heritage protection (development-led archaeology), it is the professional group that is privileged. The academic researchers can rarely satisfy business references and requirements, have much less experience in running costly and logistically complex

14 Reliance on trust is often underestimated or ignored. Hardwig (1991, 693) claims that trust is often epistemologically even more basic than empirical data and logical arguments, in fact, data and argument are available only through trust. In archaeology, this is especially the case with the use of so-called destructive methods. Excavation is a non-repeatable action or "experiment" in which the object of research is physically destroyed in situ. Further existence of an archaeological site or object is secured by recording it. What is left to the researchers is to ultimately trust the excavator that important elements are correctly recorded.

15 The post-excavation processing of findings is actually the only part of the research process where the researchers who conducted the research are actively involved, together with the monitoring archaeologists and academic experts, in designing the program of research works (additional analyses, recording, cataloguing, etc.). This obligatory step is necessary for securing the research quality and protecting the excavators from the pressure of developers to minimize costs, who look for the cheapest and not the best archaeological research and knowledge.

16 According to the actual system of bibliographic evaluation by the national research agency, the most important works are those published as original scientific papers in high-ranked international scientific journals. Monographs, for example, are less valued.

field projects, and, last but not least, their institutions lack the necessary infrastructure (e.g. heavy machinery and similar).

Clearly, the contribution of both groups to archaeological knowledge cannot be measured with the same standards, as they contribute different contents and forms of knowledge, which can be integrated on higher levels in both heritage protection and archaeology, and in doing so they depend on each other's knowledge. The actual practice of archaeology demonstrates the complementarity of two lines of research, each having specific epistemic influence in archaeological knowledge. Applied knowledge (e.g. development-led excavations) is not just repeating standard methodological and technical routines for solving concrete problems, because each individual field project is an unrepeatable creative knowledge-obtaining process.

Concluding remarks

One could say that, ultimately, all archaeologists in one way or another contribute to the building of archaeological and heritage knowledge about the past, but it is equally important to research in what social conditions this knowledge is achieved and transferred. We have looked at one phenomenon only – the existence of two distinct research groups in the Slovene archaeological "epistemic landscape", and we explored only limited aspects of such epistemic landscape created after the introduction of a new concept of heritage protection and preventive archaeology. Since this paper is the first attempt to reflect on the epistemic situation and related effects on archaeological practice in Slovenia, we have primarily mapped the situation rather analysed it in more detail. Another step would definitely include more empirical data to better understand the production of knowledge in our discipline.

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Praksa akademske in aplikativne arheologije v Sloveniji iz perspektive socialne epistemologije

Ključne besede: slovenska arheologija, arheološka praksa, socialna epistemologija, akademska arheologija, preventivna arheologija, aplikativna arheologija

V relativno številni bibliografiji arheološke teorije in epistemologije je bil vpliv prakse na epistemologijo arheologije nekoliko slabše raziskan, čeprav je v zadnjih treh desetletjih prav v arheološki praksi pršlo do korenitih sprememb. Omenili bomo samo tri medseboj povezane trende: izjemna količinska rast arheološkeg terenskega dela, več kot 90% vseh terenskih projektov se izvaja v okviru varstva dediščine in da je arheologija dejansko postala podatkovno gnana veda, ki so ustvarili nove okoliščine, ki predstavljajo izziv za tradicionalno epistemologijo in zahtevajo premislek iz perspektive socialne epistemologije. V prispevku želimo preučiti določene socialno-epistemološke vidike sodobne arheološke prakse v Sloveniji, kjer sta se oblikovali dve različni skupi-

ni raziskovalcev, akademski arheologi in terenski strokovnjaki. Razlika med obema skupinama je pričela izrazito naraščati od konca devetdesetih let, ko je bila v Slovenijo vpeljana preventivna arheologija, kot rezultat zakonodajnih sprememb na področju varstva kulturne dediščine in nastajanja tržnega modela v arheologiji. Te spremembe so odprle serijo vprašanj o epistemičnih učinkih v novih okoliščinah, npr. kako ti dve skupini raziskovalcev prispevata k arheološkem znanju, kako je strukturirano in organizirano njuno pridobivanje znanja, kateri družbeni dejavniki učinkujejo na pridobivanje znanja, in vprašanje o oblikah epistemične asimetrije.

Practice of academic and applicative archaeology in Slovenia from a social epistemological perspective

Keywords: Slovene archaeology, archaeological practice, social epistemology, academic archaeology, preventive archaeology

In the relatively abundant bibliography on archaeological theory and epistemology the impact of archaeological practice on archaeological epistemology has remained somehow less explored despite the fact that in the last three decades archaeology has undergone radical changes in practice. We would like to point to three interconnected trends: an exceptional increase in the amount of archaeological fieldwork, the fact that probably more than 90% of all field projects are in the domain of heritage protection, and that archaeology has become a data-driven discipline, producing new circumstances which challenge the traditional epistemological views and require social epistemological rethinking. This paper aims to explore some social epistemological aspects in current archaeological practice in Slovenia where two rather distinctive groups of archaeological researchers emerged, academic archaeologists and field professionals. The distinction between the two groups has grown since the late 1990s with the introduction of preventive archaeology, changes in legislation in heritage protection, and the development of the commercial sector in archaeology. These changes opened a series of questions on epistemic effects in new circumstances, e.g. how these two groups contribute to archaeological knowledge, how their modes of obtaining knowledge are structured and organized, what social factors condition these modes, and, least but not last, the question of forms of epistemic asymmetries.

O avtorju

Predrag Novaković je doktoriral iz arheologije leta 2000 na Univerzi v Ljubljani, kjer je danes zaposlen kot redni profesor za arheološko teorijo, zgodovino in metodologijo vede in prostorske in krajinske študije v arheologiji. Bil je gostujoči profesor na univerzah v Pisi, Grazu in Sarajevu. Je avtor oz. soavtor številnih člankov in monografij, med katerimi tudi *Osvajanje prostora* (Ljubljana 2003), *Osemdeset let študija arheologije na Univerzi v Ljubljani* (Ljubljana 2004), *Historija arheologije u novim zemljama Jugoistočne Evrope* (Sarajevo 2014), *The History of Archaeology in the Western Balkans* (Ljubljana 2021) in sourednik zbornika *Recent Developments in Preventive Archaeology in Europe* (Ljubljana 2016).

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