



Peer Community In Archaeology

Roster and Lexicon – A Radical Digital-Dialogical Approach to Questions of Typology and Categorization in Archaeology

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peer reviews by **Dominik Hagmann**  and 2 anonymous reviewers

Giorgio Buccellati and Marilyn Kelly-Buccellati (2023) The Density of Types and the Dignity of the Fragment. A Website Approach to Archaeological Typology. Zenodo, ver. 4, peer-reviewed and recommended by Peer Community in Archaeology.

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“The density of types and the dignity of the fragment. A website approach to archaeological typology” by G. Buccellati and M. Kelly-Buccellati (1) is a contribution to the rapidly growing literature on digital approaches to archaeological data management, expertly showcasing the significant theoretical and epistemological impetus of such work. The authors offer a conceptually lucid discussion of key concepts in archaeological ordering practices surrounding the longstanding tension between so-called ‘etic’ and ‘emic’ approaches, thereby providing a thorough systematic of how to think through sameness and difference in the context of voluminous digital archaeological data.

As a point of departure, the authors reconsider the relationship between archaeological fragments – spatiotemporally bounded artefacts and features – and their larger meaning-giving totality as the primary locus of archaeological knowledge. Typology can then be said to serve this overriding quest to resolve the conflict between parts and wholes, as the parts themselves are never sufficient to render the whole but the whole remains elusive without reference to the parts. Buccellati and Kelly-Buccellati here make an interesting point about the importance to register the globality of the archaeological record – that is, literally everything encountered in the soil – without making any prior choices as to what supposedly matters and what not. The distinctiveness of the archaeological enterprise, according to them, indeed consists of the circumstance that merely disconnected fragments come to the attention of archaeologists and the only objective data that can

be attained, because of this, are about the situated location of fragments in the ground and their relation to other fragments – what they call ‘emplacement’. This, we would add, includes the relationship of fragments with human observers and the employed methods of excavation *as observation*. As the authors say: “[i]t is in this sense that the fragments are natively digital: they are atoms that do not cohere into a typological whole”.

The systematic exploration of how the so recovered fragments may be re-articulated is then essentially the goal of archaeological categorization and typology but these practices can only ever be successful if the whole context of original ‘emplacement’ is carefully taken into consideration. This reconstruction of the fundamental epistemological situation archaeology finds itself in leads the authors to a general rejection of ‘more’ vs. ‘less’ objective or even subjective ordering practices as such qualifications tend to miss the point. What matters is to enable the flexible and scalable confrontation of isolated archaeological fragments, to do experiment with and test different part-whole relations and their possible knowledge contributions. It is no coincidence that the authors insist on a dynamical approach to ordering practices and type-thinking in archaeology here, which in many ways comes often very close to the general conceptual orientation philosopher Stephen C. Pepper (2) has called ‘organicism’ – a preoccupation of resolving the tension between heterogeneous fragments and coherent wholes without losing sight of the specificity of each single fragment. In the view of organicist thinkers, and the authors seem to share this recognition, to take complexity seriously means to centre the dialectics between fragments and wholes *in their entirety*. This notion is directly reflected in the authors’ interesting definition of ‘big data’ in archaeology as a multi-layered and multi-referential system of organizing the totality of observations of emplacement (the *Global* record).

Based on this broader exposition, Buccellati and Kelly-Buccellati make some perceptive and noteworthy observations vis-à-vis the aforementioned emic-etic distinction that has caused so much archaeological confusion and debate (3–6). To begin with, emic and etic designate different systemic logics of organizing observable sameness and difference. Emic systems are closed and foreground the idea of the *roster*, they recognize only a limited set of types whose identity depends on relative differences. Etic systems, on the other hand, are in principle open (and even open-ended) and rely on the notion of the *lexicon*; they enlist a principally endless repertoire of traits, types and sub-types (classes and sub-classes may be added to this list of course). Difference in etic systems is moreover defined according to some general standards that appear to eclipse the standards of the system itself. Etic systems therefore tend to advocate supposedly universal principles of how to establish similarity vs. difference, although, in reality, there is substantial debate as to what these principles may be or whether such endeavour is a useful undertaking. In the wild, both etic and emic systems of ordering and categorization are of course encountered in the plural but etic systems deploy external standards of order while emic systems operate via internal standards. An interesting observation by the authors in this context is that archaeological reasoning in relation to sameness and difference is almost never either exclusively etic or exclusively emic. The simple reason is that any grouping of fragments according to technological (means/modes of production) or functional considerations (use-wear, tool design, relation between form and function) based on empirical evidence is typically already infused by emic standards. The classic example from the analysis of archaeological pottery is ware groups, which reference the nexus of technological know-how and concrete practices, and which rely, in a given context, on internal, relative differentiations between the respective observed practices. Yet ignoring these distinctions would sideline significant knowledge on the past.

These discussions are refreshing as they may indicate that ordering practices – when considered as an end in themselves – misconstrue the archaeological process as static and so advocate for categories, classes, and types to be carved out before any serious analysis can begin. It could in fact be argued that in doing so, they merely construct a new closed system, then emic by definition. Buccellati and Kelly-Buccellati propose an alternative without discarding the intuition that ordering archaeological materials is conditional to the inferential and knowledge-production process: they propose that typologies should be treated as *arguments*. Moreover, the sort of argument they have in mind is to a lesser extent ‘formal-logical’ but instead emphatically ‘dialogical’ in nature, as such argumentative form helps to combat the inherent static-ness of ordering practices the authors criticize, and so discloses a radically dynamic approach to the undertaking of fragment-whole matching. The

organicist inclination to preserve 'the dignity of fragments' while working towards their resolution in attendant wholes and sub-wholes further gives rise to the idea that such 'native digital fragments' must be brought into systematic conversation with one another, acknowledging the involved complexity. To this end, the authors frame ordering work and typo-praxis as a 'digital discourse' and ask what the conditions and possibilities for such discourse are and how it can be facilitated. It is here that they put forward the idea that the *webpage* may provide an ideal epistemic model system to promote the preservation of emplaced archaeological fragments while simultaneously promoting multistranded and multi-context explorations of fragment coherence and articulation. The website enables unique forms of exploration and engagement with data and new arguments escaping the fixity of the analogue-printed which dominates current archaeological practice. Similar experiences were for example made in the context of Gardin's 'logicism', leading to broadly comparable attempts to overcome the analogue with more dynamic, HTML/web-based forms of data presentation, exploration and discussion (7, 8).

As such, Buccellati and Kelly-Buccellati table a range of fresh arguments for re-thinking typology beyond and with text at the same time, to enable 'dynamic reading' of fragment-whole relationships in an increasingly digital world. Their proposal comes thereby close to what has been termed 'deep mapping' in the context of critical cartographies and other spatially-inclined scholarship in the Anglophone world (9, 10). Deep maps seek to transcend the epistemological limitations of 2D-representations of spatiality on traditional maps and introduce different layers of informational depth and heterogeneity, which, similarly to the living digital webpage proposed by the authors, can be continuously extended and revised and which may also greatly promote multidisciplinary and team-based research endeavours. In the same spirit as the authors' 'digital discourse', deep mapping draws attention to the knowledge potential of bringing together the heterogeneous, the etic and the emic, and to pay more attention to 'multiplanar' and 'multilinear' relationships as well as the associated *relations of relations*. This proposal to deploy types and typology in general as *dynamic arguments* is linked to the ambition to contribute to and work on the *narrativization* of the archaeological record without tacit (and often unconscious) conceptual pre-subscription, countering typologies that remain largely in the abstract and so have contributed to the creeping anonymity of the past.

Bibliography

1. Buccellati, G. and Kelly-Buccellati, M. (2023). The Density of Types and the Dignity of the Fragment. A website approach to archaeological typology, Zenodo, 7743834, ver. 4 peer-reviewed and recommended by Peer Community in Archaeology. <https://doi.org/10.5281/zenodo.7743834>.
2. Pepper, S C. (1972). *World hypotheses: a study in evidence*, 7. print (Univ. of California Press).
3. Hayden, B. (1984). Are Emic Types Relevant to Archaeology? *Ethnohistory* 31, 79–92. <https://doi.org/10.2307/482057>
4. Tostevin, G. B. (2011). An Introduction to the Special Issue: Reduction Sequence, Chaîne Opératoire, and Other Methods: The Epistemologies of Different Approaches to Lithic Analysis. *PaleoAnthropology*, 293–296. <https://www.doi.org/10.4207/PA.2011.ART59>
5. Tostevin, G. B. (2013). *Seeing lithics: a middle-range theory for testing for cultural transmission in the pleistocene* (Oakville, CT: Oxbow Books).
6. Boissinot, P. (2015). *Qu'est-ce qu'un fait archéologique?* (Éditions EHESS). <https://doi.org/10.4000/lectures.19921>
7. Gardin, J.-C. and Roux, V. (2004). The Arkeotek Project: a European Network of Knowledge Bases in the Archaeology of Techniques. *Archeologia e Calcolatori* 15, 25–40.
8. Husi, P. (2022). *La céramique médiévale et moderne du bassin de la Loire moyenne, chrono-typologie et transformation des aires culturelles dans la longue durée (6e—17e s.)* (FERACF).
9. Bodenhamer, D. J., Corrigan, J. and Harris, T. M. (2015). *Deep Maps and Spatial Narratives* (Indiana University Press).
10. Gillings, M., Hacigüzeller, P. and Lock, G. R. (2019). *Re-mapping archaeology: critical perspectives, alternative*

mappings (Routledge).

Reviews

Evaluation round #1

DOI or URL of the preprint: <https://doi.org/10.5281/zenodo.10402086>

Version of the preprint: 2

Authors' reply, 18 December 2023

Please see attached the answers to the reviewers comments, and see on Zenodo the file "- Typology ZHx18.pdf" which is the new version.

[Download author's reply](#)

Decision by Shumon Tobias Hussain, Felix Riede and Sébastien Plutniak , posted 02 May 2023, validated 02 May 2023

Invitation to revise your preprint

Dear colleagues,

many thanks for submitting your draft chapter and going along with our PCI-based review process. As you will see from the reviewers' comments, your chapter is considered a potentially valuable contribution to our planned volume, packed with useful observations and insight.

All three reviewers have made critical comments but also express some more substantial reservations which must be carefully considered prior to publication. All of the points raised are constructive and offer avenues to improve and further strengthen the paper, however, so I advise to take them seriously.

The reviewers' comments are listed below.

I agree with the reviewers that a critical contextualization of the matters raised as well as a clearer statement about the problems addressed and the pursued research goals would greatly benefit your contribution - and this includes at least some more bibliographic referencing.

All of this being said, this is a potentially strong chapter that will fit beautifully into the volume - so thank you again for your submission.

We are looking forward to seeing your revised version in due time.

Best wishes,
Shumon

PS: Please provide a point-by-point response to the reviewers' comments when you upload your revised chapter to PCI Archaeology.

Reviewed by [Dominik Hagmann](#) , 06 April 2023

The article seems very promising: In the whole paper, however, it is first noticed that it has only very few literature citations. Especially on topics like typology, there is a vast amount of literature available, but unfortunately, not even "classics" like those by Gardin or (most recently) Lyman can be found. Unfortunately, as it quickly becomes apparent during further perusal, the last pages were not available in the file (where I have tried two different PDF viewers to no avail), which meant that the bibliography was also not viewable... one would have to upload a complete file for a more comprehensive review. Therefore, just two more comments:

- Abstract: The summary should be worded more clearly so that it is easier to understand what this paper is actually about. For example, it would be helpful to explain what is meant by "roster" and "lexicon" in a half-sentence or in parentheses. For example, one could write "... and the lexicon (an open ended list of attributes or definitions)."
- Illustrations: The internal arrangement of the figures should be revised in terms of their alignment, etc., and the numerous arrows used should be placed more neatly to have a clean layout.

Reviewed by anonymous reviewer 2, 02 May 2023

The article is well written and structured. It brings new elements to the overall discussion and uses many illustrative examples. Furthermore, another aspect of relevance of this paper lies on the established pioneering enterprise of the parent-project of which this article is part; for these reasons, I support the publication of this paper and would accept it with minor review.

The authors raise a lot of interesting points, even though some of them would need to be backed-up with either more archaeological or methodological details. Notably, the text lacks general information about the site the paper is about: such an introduction, albeit short, is required for the reader to get a proper context. Furthermore, the parameters of the typological procedure are missing. Since typology is a central focus of this paper, the approach taken must be explained in more detail, with the addition of pertinent references on the subject, preferably expanding outside self-citing literature.

The links mentioned in the text all function correctly. However, some of the links on the website are broken and lead to an error page.

In the pdf-file the authors can find more comments on specific text passages.

[Download the review](#)

Reviewed by anonymous reviewer 1, 11 April 2023

The chapter titled "The density of types and the dignity of the fragment A website approach to archaeological typology" presents a web-based approach to one of the crucial tools of archaeology: typology. The paper has a clear and logical structure. The argumentation is persuasive and is well grounded in empirical research. The discussion on emic and etic systems is interesting and contributes to seeing this chapter as a promising study. However, the chapter misses crucial aspects of a research paper.

My first reservation is the complete lack of references. First, the authors do not locate their research within the existing body of literature. There is no sub-chapter on state-of-the-art. Second, when presenting statements or arguments, they do not refer to important contributions related to discussed problems, i.e. fragments - archaeological theory; typology - history and theory of archaeology; digital archaeology. Most of these subjects have a very long and rich tradition in archaeological theory and it is just unbelievable that none of the important works are cited. Some of their statements could be easily backed up with existing literature. In the current form, for this reason, the chapter is unpublishable.

There are also other issues that affect the reception of this study. Starting from the beginning, the introduction is too brief and, therefore, not really informative: except for the goals of the paper, the reader does

not know the motivation to study this aspect, not to mention method or research questions (that would be answered in the conclusions).

The part "Native digitality of the archaeological record" is definitely the most interesting and full of potential; however - as mentioned earlier - no references have been introduced to back up the statements. There is plenty of literature on the idea of fragments as archaeological records, therefore, it is necessary to refer to some of selected debates. See for instance: Gavin Lucas, *Understanding the archaeological record* (Routledge, 2012); Alfredo Gonzalez-Ruibal (ed.), *Reclaiming archaeology* (Routledge, 2013); or Robert Chapman and Alisson Wylie (eds.) *Material evidence* (Routledge, 2015). On the natively digital character of fragments, see Yuk Hui, *On the Existence of Digital Objects* (UMN, 2016).

Parts of the text read like an oral presentation (i.e. delivered at a conference). I would suggest editing these parts that are announcing something ("now we will show...", i.e. p. 12, line 391). The structure of the chapter should be explained at the beginning of it (introduction). A similar remark can be made in reference to part "Sherds, wares and shapes" that looks rather like a list of figures than an element of a research paper.

Finally, the paper does not state who will use the website discussed. If it is only for professional use, it should be clearly stated. One of the main ideas behind the digital turn in archaeology was that digital tools make it possible to efficiently promote archaeology and/or educate. If this is not the case (it might be only my impression), then try to relate to the vast body of literature on professional dimension of technology and digitization in archaeology (see various papers by Jeremy Huggett, Isto Huvilla, Nicola Lercari, Sara Perry, Nicole Baele, Colleen Morgan, Costis Dallas, Rachel Opitz...).