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# ARCHAEOLOGY OF MOTION. EXPERIENCING THE PAST THROUGH EMBODIMENT

Abstract

Since the so-called "bodily turn" in the humanities, it may pass as trivial that, as observed by Alva Noë, "experience is not a passive interior state, but a mode of active engagement with the world". Nevertheless, it seems worth repeating especially that the most direct implication of this thought – that when humans actively engage with the world they do so by moving their physical bodies around – has apparently penetrated much less. This is especially true in the case of academic disciplines involved in the study of the past – history and archaeology – which seem unprepared to investigate past embodiment in a comprehensive manner.
Hence, a new methodological proposition is put forth – archaeology of motion. It is inspired by anthropologists and ethnographers' successful adaptation of participatory observation and auto-ethnography to the study of embodied practices. It makes use of embodied research advocated by Ben Spatz as well as insights from ecological psychology of James J. Gibson and its various off-shoots in order to propose a positive research programme for studies in past bodily motion. The paper is capstoned with a short account of a case study on a forgotten Polish folk wrestling style where the proposed theory was put into practice.

Keywords: embodied research, epistemology, experimental archaeology, theory of history, affordances

Słowa kluczowe: badania ucieleśnione, epistemologia, archeologia doświadczalna, teoria historii, afordancje

## Introduction

Since the so-called 'bodily turn' in the humanities, it may pass as trivial that, as observed by Alva Noë, "experience is not a passive interior state, but a mode of active engagement with the world"[1]. Nevertheless, it still seems worth repeating, especially that the most direct implication of this thought – that when humans actively engage with the world they do so by moving around their physical bodies – has apparently penetrated much less. It is perhaps most recognised in cognitive science, where human kinaesthetic make-up is sometimes seen as inherent to the formation of self[2], or in art and performance studies, where bodily gestures are pivotal for learning and creative processes[3]. But it is equally vital for disciplines dealing with traces of the past. After all, these traces usually take the form of material objects created through motion – e.g. by throwing on a potter's wheel – and were meant to be moved or accompany movement. Even written or pictorial sources have their materiality and were themselves products of a lived, i.e. somatic and kinaesthetic, experience of being-in-the-world[4]. Surprisingly, although these aspects should be seen as all the more crucial for archaeology, traditionally preoccupied with material artefacts, they still lack enough recognition:

> Historically, it is important that we have advanced toward 'meaning' after too long focusing upon environmental or economic motivations, yet we must also now consider the embodied realities of being in the world. Studies of materiality cannot simply focus upon the characteristics of objects but must engage in the dialectic of people and things. (...) At a very simple level, the cultural constitution and understanding of objects remains a neglected area[5].

Of course, the above-quoted observations by Lynn Meskell come from 2005 and it would be unfair not to mention that significant advancements have been made since then in archaeological theory. However, whereas things and embodiment

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1 Alva Noë, "Experience and experiment in art", *Journal of Consciousness Studies* 7, 8–9 (2000): 128.

2 See, for instance, the concept of "egomotion" developed within the ecological psychology of James J. Gibson: Harry Heft, *Ecological psychology in context: James Gibson, Roger Barker, and the legacy of William James's radical empiricism* (Mehwah-New York-London: Psychology Press, 2001), 120–122. Mainstream psychology, in turn, has extensively explored the inherent connection between bodily motion and cognition in studies on "body schemata" as originally defined by Shaun Gallagher: Shaun Gallagher, *How the Body Shapes the Mind* (Oxford: Oxford University Press, 2005).

3 "By moving around the space, an artist changes the viewing position, multiplying the perspectives and invigorating their 'practical knowledge'", Katrinka Wilson, "Nests: Drawing as Morphological Imprint", *Tracey: Drawing and Visualisation Research* 11, 1 (2016): 1–7.

4 For a recent digest, see *The Materiality of Reading,* ed. Theresa Schilhab and Sue Walker (Aarhus: Aarhus University Press, 2020).

5 Lynn Meskell, *Archaeologies of Materiality* (Maiden: Blackwell Publishing, 2005), 4.

were to a degree "re-membered", championed by the likes of Bjørnar Olsen[6], Michael Shanks[7], or more recently Katie Smith and Leonie Hannan[8], the same cannot be said about their kinaesthetic aspect – which happens to lie at the core of Meskell's "dialectic of people and things". Bodies have been considered as historical social constructs, e.g. in different histories or archaeologies of the body, or as sources elucidating other facets of culture, e.g. in bioarchaeology of care[9], but received little to no attention as physical and dynamic actors themselves[10]. In other words, bodies, especially the lived internal experiences of bodily movement (hereafter referred to as somatic motion[11]), have been discussed in history and archaeology predominantly as objects of knowing and derivatives of culture, not as a means of knowing and cultural drivers. The undertreatment of this kinaesthetic aspect is puzzling, especially given that it seems acknowledged in theory[12] and is also increasingly put to practice, sometimes termed as "a haptic approach"[13], in the related disciplines of anthropology and ethnography[14]. This very lacuna is where the present essay shall be focused.

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6 Bjørnar Olsen, "Material Culture After Text: Re-Membering Things", *Norwegian Archaeological Review* 36, 2 (2003): 87–104.

7 Michael Shanks, *Experiencing the Past: on the Character of Archaeology* (New York-London: Psychology Press: 1992).

8 Katie Smith and Leonie Hannan, "Return and Repetition: Methods for Material Culture Studies", *Journal of Interdisciplinary History* 48, 1 (2017): 43–59.

9 See Lorna Tilley, *Theory and Practice in the Bioarchaeology of Care* (Cham-Heidelberg-New York-Dordrecht-London: Springer, 2015).

10 For a concise but insightful review of archaeological reworkings of the notion of "body", see Magdalena Domicela Matczak, "Archeologia ciała", *Przegląd Archeologiczny* 61 (2013): 51–75. The research gap in regard to historical perspectives on the very physicality of human bodies is evidenced in *Histoire du corps,* vol 3, ed. Alain Corbin, Jean-Jacques Courtine, and Georges Vigarello (Paris: Le Seuil, 2006), chaps. 4 and 5. Finally, I have already proposed certain methodological avenues aimed at this gap in Maciej Talaga, "Affordances theory as an operational framework for interpretation of past material culture and practices. Praxiography of things, bodies, and motions", *AVANT. Trends in Interdisciplinary Studies* 11, 2 (2020): 1–22.

11 Borrowing from the concept of "soma" defined by Thomas Hanna as the body "perceived from within by first-person perception", Don Hanlon Johnson, *Bone, Breath, and Gestures: Practices of Embodiment* (Berkeley: North Atlantic Books, 1995), 341.

12 See, for instance, an overview of this concept's circulation in historical research presented in Iris Clever and Willemijn Ruberg, "Beyond cultural history? The material turn, praxiography, and body history", *Humanities* 3, 4: 546–566.

13 For the etymology of the term, as well as a thorough methodological discussion and review of pertinent literature, see Mark Paterson, "Haptic geographies: ethnography, haptic knowledges and sensuous dispositions", *Progress in Human Geography* 33, 6 (2009): 766–788.

14 The body of related research in these fields has grown enough in recent decades to allow Beate Littig to precede her praxiographic study of high-heeled shoes in Argentine tango with a confident statement that "in addition to external observation, the study of incorporated physical practices (like dancing or playing a musical instrument) ideally requires the use of the researcher's own body as a research instrument", Beate Littig, "On High Heels: the Praxiography of Doing Argentine Tango", *European Journal of Women's Studies* 20, 4 (2013): 458.

## Why bother with somatic motion?[15]

It may be legitimately asked why one should be bothered with 'somatic motion' as yet another category in historical thinking, especially since past body techniques have already been investigated by bioarchaeologists and paleopathologists. To illustrate, one could quote the well-publicised study which linked osteoarchaeological data to particular activities undertaken by the crewmen of the 16th-century English warship, *Mary Rose*[16]. More recent examples could be a study on skeletal markers of Hungarian 10th-century horsemanship[17] or a paper on disability and personhood from the bioarchaeological perspective[18]. However, what these and similar studies have in common is that they do not deal with somatic motion itself, but rather its socio-cultural consequences[19]. For instance, the aforementioned study on horsemanship does not provide any information about the riding technique used by the persons investigated. In turn, the *Mary Rose* research does not address such questions as how the crewmen planted their feet while walking on board – whether they tended to use their forefoot or heel to strike the deck, etc. Omission of these details is understandable, due to limitations of the sources, and does not undermine the validity and importance of the insights presented in these studies, but I would argue that it leaves some research potential untapped.

Archaeologists have long relied on scrutinising and typologising material artefacts as a way of inferring about cultures and societies, and they did so with good results. What I would like to propose is applying a similar scrutiny to the movements of human bodies – movements which themselves may be, and should be, seen as material artefacts, albeit of an ephemeral and largely intangible character. This line of reasoning is compatible with the ideas behind UNESCO's convention from the year 2003[20], which sees "intangible cultural heritage" as the skills and traditions rather than their material products. In other words, I propose to pay attention to past bodily skills, or what Marcel Mauss called "the techniques of the body"[21]. I believe that by researching the technical details of such movements or skills as horse-riding or walking archaeologists

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15 This section was added to address insightful reservations presented by one of my anonymous reviewers, to whom I am very grateful.

16 Ann Stirland, "The Men of the Mary Rose", in *The Social History of English Seaman 1485–1649,* ed. Cheryl A. Fury (Woolbridge: The Boydell Press, 2012), 47–74.

17 William Berthon, Balázs Tihanyi, Luca. Kis, László Révész, Hélène Coqueugniot, Olivier Dutour, and György Pálfi, "Horse riding and the shape of the acetabulum: Insights from the bioarchaeological analysis of early Hungarian mounted archers (10th century), *International Journal of Osteoarchaeology* 29, 1 (2019): 117–126.

18 Alexis T. Boutin, "Exploring the social construction of disability: An application of the bioarchaeology of personhood model to a pathological skeleton from ancient Bahrain", *International Journal of Paleopathology* 12 (2016): 17–28.

19 Not to mention that only some habitual movements leave traces on skeletal remains.

20 The Convention for the Safeguarding of the Intangible Cultural Heritage, see https://ich.unesco.org/ (accessed 21 June 2021).

21 Marcel Mauss, "Techniques of the Body", *Economy and society* 2, 1 (1973): 70–88.

and historians could add another layer to their interpretations of cultural identities as well as intercultural and historical processes of continuity and change.

Similarly to the methodological project of the "bioarchaeology of personhood", recently proposed by Alexis T. Boutin, I believe that pursuing the goal thus defined would require reaching beyond the traditional archaeological toolbox and considering alternative methods[22]. An example of research paving the way in the right direction could be a recent study on Bronze Age swords which combined wear-analysis with experimentation assisted by skilled non-academicians to reconstruct fine details of the period's swordsmanship and, therefrom, propose a convincing re-interpretation of the socio-cultural dynamics of these past societies[23]. This is the path I would like to see taken by more scholars of the past.

## Past motion: whose job is it?

Before we proceed any further, however, an important question has to be addressed: if bodily motion is an inseparable feature of human lived experience, then who should be responsible for investigating its past?[24] Should it be entrusted to archaeologists, due to their presumed expertise in all things material? The problem is not straightforward, because while motion is "present" in things, which may be called "bundles of activities"[25] not only guiding but also evoking kinaesthetic behaviour, this presence cannot be detected unless the perceiver either moves the thing or observes someone else doing it. In a way, therefore, motion preserved in material historical relics is both profoundly embodied and intangible. The proverbial excavated pot was produced through motion (of

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22 To quote Boutin's own words: "The fifth and final tenet of the Bioarchaeology of Personhood model is an openness to alternative modes of interpretation, which can both provide a more humanizing view of past personhoods and communicate effectively and accessibly with a broad range of audiences. (...) The gold standard for [mainstream archaeological contributions – MT] is publication in peer-reviewed journals or books, which encourage conformity in manuscript structure, terminology, and even mode of inquiry. On the one hand, adhering to such normative forms of dissemination can ensure that a scholar maintains the faculty position that permits such research to occur. On the other hand, many of the resulting publications can only be read by public (and even some academic) audiences if hefty subscription or open-access fees are paid. We risk creating echo chambers of rarified scholarship that homogenize knowledge, privilege practitioners' normativity, and disengage (or worse, alienate) the public", Boutin, *Exploring the social construction*, 18.

23 Raphael Hermann, Andrea Dolfini, Rachel J. Crellin, Quanyu Wang, and Marion Uckelmann, "Bronze Age Swordsmanship: New Insights from Experiments and Wear Analysis", *Journal of Archaeological Method and Theory* 27 (2020): 1040–1083.

24 I take it for proven here that there is a diachronic, historical aspect to human motion; the basic work which deconstructed the essentialist notions of universal human body is the aforementioned essay by Mauss: Mauss, *Techniques*.

25 Theodore R. Schatzki, *The site of the social: A philosophical account of the constitution of social life and change* (University Park: Penn State Press, 2002), 71.

humans and non-humans in a pottery workshop) and intended to participate in motion (of its users and their stuff). However, humans seem to be notoriously poor at assessing the kinaesthetic potential of material objects, including their own bodies, based on visual data or mental representations alone[26]. Hence, it turns out to be very tricky to infer the functional characteristics of many archaeological artefacts without actually setting them in motion and exposing oneself to their embodied presence[27], which is not always possible. Also, archaeological relics are parts of "dead culture" and thus the way they invite us to move may be markedly different from how they affected people in their "living" contexts[28]. The weight of this methodological problem shows in the critical approach of many scholars towards ethnoarchaeology or archaeological experimentation[29].

Should we then leave the task of investigating past somatic motion to historians, relying on their knowledge of symbolical accounts (written and iconographical) of humans' experience? This may also misfire, due to modern history's commitment to textualism, with its privileging of the written word. This tendency entails a predominantly representationalist view of cognition and epistemology, as well as an emphasis on the political nature of historiography and epistemological fissure between the historian and their object of study[30]. This combination of philosophical and metaphysical assumptions can be traced back to the seminal works by Hayden White and Jacques Derrida. It is hardly a coincidence that already in the 1990s Derridean influences have been blamed for the inadequacy of standard historical approaches, modelled on literary sources, for the study of oral traditions and the orality preserved in the historical record[31]. So much so that it compelled Ward Parks to posit that literary histo-

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26 Heft, *Ecological psychology*, 131, fn. 7.

27 Talaga, *Affordances*, 18–19.

28 For an up-to-date discussion of the dead-living dichotomy in archaeological theory as well as its implications for interpreting functions of excavated material objects, see Philipp W. Stockhammer, "Lost in Things: An Archaeologist's Perspective on the Epistemological Potential of Objects", *Nature and Culture* 10, 3 (2015): 269–283.

29 On ethnoarchaeology, see Olivier P. Gosselain, "To Hell with Ethnoarchaeology!", *Archaeological Dialogues* 23, 2 (2016): 215–228. The problematic nature of experimental archaeology, in turn, may be illustrated by the recent vivid debate around the controversial study of the Cerruti Mastodon site in California, published in S. R. Holen et al., "130,000-year-old archaeological site in southern California, USA", *Nature* 544, 7651 (2017): 479–483. For the overview of its critical reception, with all the relevant literature references, see Metin I. Eren and Michelle R. Bebber, "The Cerutti Mastodon site and experimental archaeology's quiet coming of age", *Antiquity* 93, 369 (2019): 796–797.

30 For a strong argument in defence of this position and against contemporary attempts at overturning the dominance of textualism in the "work of history", see Kalle Pihlainen, "The Eternal Return of Reality: On Constructivism and Current Historical Desires", *Storia della storiografia* 65, 1 (2014): 103–115. This line of argumentation has recently been laid out by the same scholar in greater detail: Pihlainen, *The Work of History: Constructivism and a Politics of the Past* (New York: Routledge, 2017).

31 A collection of insightful critical essays by oral history researchers can be found in *Vox Intexta. Orality and Textuality in the Middle Ages,* ed. A. N. Doane and Carol Braun Pasternack (Madison: University of Wisconsin Press, 1991).

rians may have developed too narrow a perspective on human cognition by generalising the very specific way of contemplating the world characteristic of their profession:

> The Derridean privileging of writing "triumphed" as it did because of its appeal to the prejudices of the literary/scholarly class. (...) Deconstruction celebrates a concept of language that replicates in philosophical terms the daily research habits of the literary humanist (...) without acknowledging the extent to which it is invested in a particular point of view. (...) Once this starting point has been admitted, once we have established our imaginative vision in a space where the texts are the first things to greet it, then all else follows. "Reality" becomes so problematic that it is virtually banished from hermeneutical discussions. For texts, by the rules and research habits we have established, refer only to other texts, and reality reimposes itself on our awareness only when we have locked up the office for the day. But within this critical discourse reality is never given its moment[32].

Should one agree with Parks' observation, it would in itself be a strong point in favour of the crucial role played by the kinaesthetic make-up of the historian. Yet, regardless of the validity of this conclusion[33], the fact remains that history lacks an established tradition of implementing scholars' embodiment into research comparable to, for instance, the participatory observation or auto-ethnography developed in anthropology[34]. At the same time, there is a growing body of theoretical reflection coming from historians and archaeologists who are dealing with deeply embodied practices, such as dance, music, yoga, or martial arts. Interestingly, even those among them who subscribe to classical textualist or narrativist philosophies of history, like Eric Burkart, do admit that such "practices (...) are hard to understand for non-practitioners who are lacking practical knowledge of the subject"[35]. Therefore, I would like to posit that the complex question of human bodily motion cuts across the traditional boundaries between history and archaeology and calls for an interdisciplinary or perhaps rather transdisciplinary approach, combining the academic with what may be termed athletic or somatic disciplines – studies performed by educated academics and expert practitioners of given bodily techniques. I believe that, despite their differences, history and archaeology are equally in trouble when it comes to grasping the totality of the past, partially because they lack tools for investigating some of the embodied experiences which formed its core.

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32 Ward Parks, "The Textualization of Orality in Literary Criticism", *Vox Intexta*, 49–51.

33 I am far from delivering a judgement here, but it seems no coincidence that a similar remark has quite recently been made by Smith and Hannan: "Historians inhabit a professional culture that is typically disconnected from hands-on, materially focused practices. Beyond turning the pages of a manuscript, most historians lack the kind of material literacy that is increasingly becoming a key part of research practice", Smith, Hannan, *Return,* 49.

34 For an introduction to auto-ethnography and its relation to other anthropological modes of inquiry, see Carolyn Ellis, *The Ethnographic I: A Methodological Novel about Autoethnography* (Walnut Creek: Alta Mira Press, 2004).

35 Eric Burkart, "Limits of Understanding in the Study of Lost Martial Arts"*, Acta Periodica Duellatorum* 4, 2 (2016): 9.

In effect, the dichotomy between history and archaeology has no bearing for studies focused on past motion and thus from now on I will use the terms "history", "historical", or "historians" in the broadest possible sense – as referring to any kind of research or researchers striving to investigate the past, regardless of the faculties they affiliate with. At the same time, I believe that archaeology's material entanglement as a scholarly domain makes it a natural habitat for historians of somatic motion.

## Towards an archaeology of motion

As explained above, a new method seems needed for writing a more embracing history of embodiment – in particular to outline and appreciate humans' somatic motion as both cultural product and actor. But this method is by no means to replace traditional research procedures. It should rather supplement them by charting pathways enabling a closer diachronic look at Mauss's "techniques of the body". In this context, I will continue by following crucial questions posed by Burkart in regard to contemporary bodily practices intended as a way of reconstructing past embodiment:

> For a practitioner, however, the individual embodied knowledge acquired through former education and training sets the stage for any scientific inquiry and any interpretation of *[historical – MT]* source material. The reconstruction of past technique is therefore first of all an epistemological and hermeneutical problem that has to address the following questions: What is technique and how is it related to practice? How is technique acquired and transmitted? How can technique be recorded? And finally, how can historical records of technique be understood, interpreted and converted into practice?[36]

Burkart addresses these questions by performing a hermeneutical analysis of research undertaken by a community of martial artists striving to reconstruct historical European martial arts (HEMA) on the basis of these arts' descriptions and depictions preserved in specialist period literature, jointly referred to as "fight books"[37]. In his conclusions, he appreciates certain values of such a practice-based approach, especially for raising public interest in history and generating research questions, but remains sceptical in regard to its actual validity as a way to establish knowledge about the past:

> [T]he main part of medieval fighting technique as knowledge is lost and not documented in the fight books. The attempts to interpret these traces of medieval technique and to put them

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36 Burkart, *Limits*.

37 A broad overview of this phenomenon combining efforts of amateurs and academicians is provided by a recent edited volume: *Late Medieval and Early Modern Fight Books: Transmission and Tradition of Martial Arts in Europe (14th–17th Centuries)*, ed. Daniel Jaquet, Karin Verelst and Timothy Dawson (Leiden-Boston: Brill, 2016).

> into practice therefore have to be seen as modern constructions based on modern bodies *(...)* only informed by the fight books[38].

I disagree with this opinion. Incidentally, my objection is based on reading the same theoretician as Burkat – namely Ben Spatz. Therefore, below I will present an alternative take on Spatz's notion of "embodied technique" which is crucial in Burkart's argumentation. In doing so, I will try to delineate a theoretical framework justifying the use of motion-based research strategies akin to auto--ethnography or participatory observation in historical studies. Simultaneously, I also hope to provide those who already implement them, many of whom are non-academicians, with a case study and a reasoning why such an embodied approach can indeed be a valid way to investigate the past.

## Technique, practice, knowledge, and somatic motion

While developing their[39] idea of embodied practice as a means of epistemological inquiry and production – embodied research – Spatz traces how actions performed by, through, and on human bodies have so far been conceptualised by different thinkers. Starting this "selective genealogy" with Aristotle and his distinction between *technê* and *episteme*, Spatz then goes on to discuss how Samuel T. Coleridge introduced the term "technique" into English artistic discourse and infused it with dismissive connotations – in regard to art, such as poetry, technique was understood as the mechanical, mundane aspect which had to be transcended in order for a truly creative process to unfold[40]. However, such understanding, although it has ever since persisted in scholarship on artistic performance[41], lies in stark contrast with the use of the same term by Mauss who saw technique as the main achievement and driver of human civilisation. Having noticed this and reviewed Mauss's notion of technique, Spatz traces similar ideas in the writings of Michel Foucault and some more recent works in order to arrive at his own conceptualisation. There is no room to recount their whole reasoning here[42], so let

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38 Burkart, *Limits*, 24.

39 Ben Spatz is a non-binary person, so whenever a personal pronoun is needed I shall use "they/them/their".

40 Ben Spatz, *What a Body Can Do: Technique as Knowledge, Practice as Research* (London-New York: Routledge, 2015), 26–28.

41 Spatz reviews relevant literature and terms this phenomenon "the trope of excess", alluding to the widely-accepted assumption that any artistic value in human embodiment comes from going beyond "mere technique", see Spatz, *What a Body Can Do,* 56–60. Along the same vein, Monroe C. Beardsley defined "dance" as a kind of motion where "(...) there is more zest, vigor, fluency, expansiveness, or stateliness than appears necessary for its practical purposes, there is an overflow or superfluity of expressiveness to mark it as belonging to its own domain of dance", see Monroe C. Beardsley, "What is Going on in a Dance?", *Dance Research Journal* 15, 1 (1982): 35.

42 For the whole discussion, see Spatz, *What a Body Can Do,* 26–38.

it suffice to note that they borrowed ideas from Foucault's diachronic analyses of embodiment as an interplay between power and knowledge and Nick Crossley's concept of body-mind interactions "by indirect means" to forge a nuanced conceptual dyad of embodied "technique" and "practice"[43]. This distinction can be summarised as a chart (Tab. 1).

| Technique | Practice |
|---|---|
| Knowledge | Action |
| Repeatable | Unique |
| Transmissible | Ephemeral |

What is crucial from the perspective proposed here is that while *practice* is uniquely bound to a given acting body and situational context, *technique* is "transhistorical", because it "travels across time and space, 'spreading' from society to society (...) and linking diverse practices to one another, whether or not its practitioners are aware of this connection"[44]. This diachronic transmission is impossible in case of *practice*, i.e. specific instances of motion. Since any such instance is an unrepeatable moment of "coregulative interaction"[45] involving a combination of human and non-human (f)actors, *practice* is indeed unique and ephemeral (Tab. 1). Spatz illustrates this with a characteristic culinary analogy:

> What does it mean to "share" a practice across time, space, and bodies? What is it that links together different instances of farming or cooking? Clearly, if two people are cooking the same meal in different places, they are not literally cooking the same meal. For that matter, when I cook the same meal on several days, it is also not literally the same meal. What then does it mean to suggest that various groups or individuals, in different times and places, are or were doing the same thing? What kind of "thing" were they doing and in what sense can it be the same?[46]

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43 Spatz also carefully distinguishes between "technique" and "technology", as he sees the latter term as too strongly associated with material artefacts and body-thing hybrids to be useful for discussing embodiment alone, see Spatz, *What a Body Can Do,* 11–14.

44 Spatz, *What a Body Can Do,* 41.

45 This term has recently been thoroughly scrutinised in regard to multi-actor embodied practices by Michael Kimmel and Christian R. Rogler, "Affordances in Interaction: the Case of Aikido", *Ecological Psychology* 30, 3 (2018): 195–223. It is also no accident that the aforementioned article was published in a periodical focused on ecological psychology, since this school of cognitive science emphasises the reciprocity between perceiving and acting and the constitutive role played by mutual agent-environment interactions in embodied cognitive processes – for a broader discussion, see Heft, *Ecological psychology*, chap. 3. The affordances theory seems to be gaining momentum also in the humanities – for instance, Gibson's works are discussed extensively in Paterson, *Haptic geographies*, esp. 768–771.

46 Spatz, *What a Body Can Do,* 39.

The first part of the above quote is the reason why, as mentioned earlier, Burkart correctly argues that contemporary researchers have no way to access past *practice*. However, by deriving therefrom that "reconstruction" of past embodied phenomena is impossible, he seems to have overlooked some of the very interesting answers given to the above-quoted questions. According to Spatz, different instances of *practice* may share the same *technique* which differs from *practice* in that it is not an embodied action but an epistemic framework structuring such actions:

> *[Similarities between practices]* can be seen as an area of technique, or as the ***knowledge content*** of specific practices. In other words, the relationship between technique and practice is epistemic. This finally allows us to understand what may connect my practice of swimming or dancing with that of people living thousands of miles away or hundreds of years ago. If we are doing the "same thing", that is precisely and only because we are making use of the same technique, the same ***knowledge of what is reliably possible*** given the similarities we find in our bodies and environments. *(...)* The question for theorists of practice is then not what does or does not count as an example of a given practice, but rather the extent to which different practices are structured by the same technique. This enables us to track the movement of technique across history, while at the same time retaining a highly specific and localized notion of practice[47] *[original emphases].*

This suggests that while past *practice* is indeed forever lost and intangible for historians, *technique* may be preserved in some way, shared horizontally (synchronically) and vertically (diachronically), and thus – reclaimed. What Spatz does not specify, however, is how exactly historical embodied *technique* can be accessed and reconstructed by modern scholars. Nevertheless, they provide interesting clues by quoting Mauss and stressing the fact that embodied *technique*, although it is certainly affected by various socially-constructed forces such as *habitus*[48], is simultaneously a "compromise between humanity and nature". Importantly, "nature" here should be understood phenomenologically – as "the relative reliability of the world, the material substrate with which technique grapples"[49]. This allows Spatz to advance the idea of "embodied research" as a somatic equivalent of scientific inquiry, since much like the laws of nature studied by scientists, embodied *technique* is largely "made up of discoveries about the relative reliabilities of the material world" – and thus "the same channels or pathways may be uncovered by people working in parallel, without contact or communication"[50]. Perhaps then, even if historians will never

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47 Spatz, *What a Body Can Do,* 41.

48 For Spatz's treatment of Pierre Bourdieu's notion of *habitus* and its analogies developed by other thinkers, see Spatz, *What a Body Can Do*, chap. 1, esp. 50–56.

49 Spatz, *What a Body Can Do,* 31–32.

50 Spatz, *What a Body Can Do,* 61. Similar avenues have been explored in many traditional historical or archaeological studies, as well as in more embodiment-oriented works, under various names such as "cultural logic" or "cultural convergence". For instance, see Edward F. Fischer, "Cultural Logic and Maya Identity: Rethinking Constructivism and

be able to "reconstruct" past embodied *technique*, they may still hope to "rediscover" it by following the right somatic "channels or pathways". But where should they start?

## Affordances and experience in historical inquiry

In an earlier paper[51], I proposed that a convenient vantage point for *embodied research* in history is provided by the so-called "affordances theory", a perspective on human and animal cognition developed within the ecological psychology of James J. Gibson[52]. Due to the limited volume of this article, I will only summarise its most relevant points. First of all, ecological psychologists reject the Cartesian "mind-body distinction" and representationism – i.e. an assumption that perceiving agents interact with external environment only indirectly, by forming and processing mental representations of the latter. In fact, Gibson argued against any "externality" and separation between agent and environment or – as Harry Heft summarised it – believed that "the neat separation that can be drawn between environment and animal at a physical/physiological level of analysis is not present at an ecological/psychological level of analysis"[53]. Moreover, if the fissure between the knowing subject and the object known is removed, mental representations are no longer necessary to navigate the world – hence Gibson's insistence on the direct nature of cognition, unmediated by language or other symbolic means. In result, ecological psychology rejects the constructivist view that meaningful features of environment are imposed on it by perceiving agents, and instead proposes that meaning is already present in the "latent structure" of the environment's material make-up[54]. The structure is rich in epistemic elements – Heft terms this feature of the materiality of the world as "ecological knowledge":

> Some basic features of the terrestrial environment (e.g., ground surfaces, graspable and liftable objects, and water) have functional meanings for a perceiver apart from social processes (...) *[but at the same time]* some of the things we have come to understand about

Essentialism", *Current Anthropology* 40, 4 (1999): 473–500; more recent examples can be found in David Wengrow et al., "Cultural Convergence in the Neolithic of the Nile Valley: a Prehistoric Perspective on Egypt's Place in Africa", *Antiquity* 88, 339 (2014): 95–111 or Sandra E. Trehub, "Cross-cultural Convergence of Musical Features", *Proceedings of the National Academy of Sciences* 112, 29 (2015): 8809–8810.

51 Talaga, *Affordances*, 5–8.

52 Gibson's classic and fundamental work, originally published in 1979, has recently been re-edited as James J. Gibson, *The Ecological Approach to Visual Perception: Classic Edition* (New York-London: Psychology Press, 2014). However, his original and influential concept of "affordances" has been developed gradually and over a series of different works. Hence, for a helpful guidebook to the entirety of Gibson's theoretical and empirical legacy relevant to the problems discussed here, see Heft, *Ecological psychology*, chaps. 3, 4, 8, and 9.

53 Heft, *Ecological psychology*, 110.

54 Heft, *Ecological psychology,* 30. For a broader discussion directly related to the scope of this paper, see Talaga, *Affordances,* 2–5.

> the effects of certain actions on the environment we have subsequently **built into environmental structures themselves**. These latter constructed **embodiments of what is known**—which include **tools, artifacts**, representations, **social patterns of action**, and institutions—can be called ecological knowledge[55] *[emphases added – MT]*.

An important insight here is that material objects ("tools, artifacts") and embodied practices ("social patterns of action") have some epistemic content that cannot be accessed unless one actively and purposefully engages them through physical motion of one's own body. By moving, one lets the *latent structure* of the materiality of objects or practices guide their experience by means of dynamically emerging *affordances* – bits of information flowing between an acting agent and environment, including material objects present in it[56]. Michael Kimmel and Christian r. Rogler, in their well-thought-out ecological study of the interactions involved in the practice of Aikido, define *affordances* as "informational pointers to action options" or "perceivables that bear strategic information" for agents involved in a given interaction, and they stress their dynamic, emergent, and relational character[57]. It bears noting that other scholars point to *affordances*' crucial role in "functional semantics" enabling cooperation of multiple agents in complex embodied tasks organised within a particular material milieu, such as team sports[58], or to their interaction with psychological and socio-cultural factors to form broader "affordance landscapes"[59]. Hence, affordances may be seen as elementary particles of the *ecological knowledge* present in material objects and practices which allows them to structure both *practice* and *technique* as proposed by Spatz.

In simpler words, by combining the perspectives of Spatz's *embodied research* and Gibson's *affordances theory* it becomes clearer that by experiencing the materiality of historical relics (or their accurate replicas)[60] or engaging in

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55 Heft, *Ecological psychology*, 330.

56 Gibson never provided a final definition of *affordances* himself, but his perspective is summarised by Heft in the following way: "An affordance is the perceived functional significance of an object, event, or place for an individual. For example, a firm, obstacle-free ground surface is perceivable as a surface on which one can walk. (...) Affordances point to an important but often overlooked quality of the world—that its features are meaningful for an active perceiver", Heft, *Ecological psychology,* 123. In the same paragraph, Heft also lists references to empirical studies aimed to explore *affordances* in field or laboratory conditions.

57 Kimmel and Rogler, *Affordances*, 196; this article also offers a comprehensive and up-to-date literature review on the theoretical and empirical elaboration of the concept of *affordances*.

58 Brett R. Fajen, Michael A. Riley, and Michael T. Turvey, "Information, Affordances, and the Control of Action in Sport", *International Journal of Sport Psychology* 40, 1 (2009): 79–107.

59 Jelle Bruineberg and Eric Rietveld, "Self-organization, free energy minimization, and optimal grip on a field of affordances", *Frontiers in Human Neuroscience* 8 (2014), doi:10.3389/fnhum.2014.00599.

60 Such as artefacts excavated by archaeologists – which is, unsurprisingly, a core research practice in archaeological use-wear analysis. For an example of a study combining such analysis with experimentation, see Sophie Méry et al., "A Pottery Workshop with Flint

practices closely modelled on their historical descriptions (or depictions)[61] researchers expose themselves to the same or similar *affordances* as the past practitioners. Hence, while they by no means repeat past *practice* (i.e. they do not recreate how particular past people moved), they have a chance of developing the same *technique* – i.e. move in a way that would be similar enough to the past *practice* to be considered "the same thing". This is the underlying theory, still not articulated explicitly in the philosophy of history, behind archaeological experimentation or other experiential approaches to the study of the past, such as Frank R. Ankersmit's notion of "sublime historical experience"[62]. If we assume that this theory is solid, then how come experimental archaeology or Ankersmit's "yearning for reality and presence"[63] attracts such strong opposition from theorists of history?

## Experimenting past motion: why it fails?

Simplifying slightly for the sake of brevity, the main critique against experimental archaeology or experiential methods in historiography points to their inconclusive results – they "cannot demonstrate that ancient people did something in a particular way and only in that way"[64]. However, as already pointed out in the previous section, experimental studies of the past should not seek to show that people did things in one particular way – or in Spatzian terms, to reconstruct past *practice*. This would be an impossible task indeed, since even in synchronic live teacher-student interactions, or when the same person does "the same thing" twice, the latter *practice* is not an identical copy of the former. *Practice* is a moment, unique and with strictly defined temporality and spatiality, so any useful *technique* linking different instances of the same *practice* has to allow for certain variation[65].

Perhaps then, experimentally-inclined historians could rebut this critique by reframing their research goals. For one, their cause would certainly benefit, if they turned away from re-enacting past motion towards paraphrasing it. In his *Limits of Interpretation* Bartosz Brożek, a Polish cognitive philosopher, convincingly demonstrates that the rapidly accumulating body of empirical and theoretical works performed by cognitive scientists, linguists, and philosophers

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Tools on Blades Knapped with Copper at Nausharo (Indus Civilisation, ca. 2500 BC)", *Journal of Archaeological Science* 34, 7 (2007): 1098–1116, doi:10.1016/j.jas.2006.10.002.

61 Such as the aforementioned European martial arts preserved in fight books, cf. Burkart, *Limits.*; Daniel Jaquet, "Experimenting Historical European Martial Arts, a Scientific Method?", in *Late Medieval and Early Modern Fight Books*, 216–243; and Talaga, *Affordances*, 13–17.

62 Frank R. Ankersmit, *Sublime Historical Experience* (Stanford: Stanford University Press, 2005).

63 Pihlainen, *The Eternal Return*, 103.

64 John Coles, *Archaeology by Experiment* (New York-London: Routledge, 2014), 15.

65 Spatz, *What a Body Can Do*, 43.

suggest that functional paraphrase is an enactment of understanding – in other words, people understand what they can repeat to the same effect[66]. Crucially for experimental historians, paraphrase does not equal exact repetition, but consists in producing a functionally matching variant. Hence, the key task for experimenting scholars of the past would be to define the boundary conditions for "authentic" reconstruction – or "the extent to which different practices are structured by the same technique"[67]. Posed this way, the aim of experimental and experiential methods of studying past somatic motion becomes easier to defend against the inconclusivity critique; however, the strength of this defence hinges on some additional factors.

## The problem of "authenticity" in the reconstruction of embodied practices

If we accept the paraphrase paradigm in the reconstruction of past embodied practices delineated above, then the next step is to wrestle with the idea of the "authenticity" of the results obtained this way. *Technique* can accommodate many different *practices* – crucially, the same *technique* may structure motions of both an expert practitioner and a novice[68]. However, it is also true that the *ecological knowledge* preserved in a given object or practice will "expand and open up in proportion to the amount of attention it is paid"[69]. Hence, John Coles rightly points out that an important factor undermining the epistemological value of archaeological experiments is the inadequate proficiency of experimenters in performing the investigated practices[70]. This in turn calls for open-ended, flexible study designs and adopting "repetition as a distinct methodology"[71] – i.e. experiments conducted in series or over a prolonged period of time, so

66 Bartosz Brożek, *Granice interpretacji* (Kraków: Copernicus Centre Press, 2018), 181.

67 Spatz, *What a Body Can Do*, 41.

68 As noted by Kimmel and Rogler, repetition of the same fixed movement patterns, such as *kata* in Japanese martial arts, benefits both experts and novices, because over time it increases the density of affordances perceived in what may appear as the same motion practiced again and again, see Kimmel and Rogler, *Affordances*, 204. Similarly, Littig noted that upon gaining proficiency, tango dancers may perform the same movement but in increasingly demanding footwear, which in effect renders particular types of shoes used by a dancer an efficient indicator of their skill level and thus – status within the tango community, see Littig, *On High Heels*, 462.

69 Spatz, *What a Body Can Do*, 63. Analogous ideas have been proposed and subsequently tested in an ingenious collaborative empirical study described by Smith and Hannan, *Return.*

70 Coles, *Archaeology by Experiment*, 16.

71 Smith and Hannan, *Return,* 44. This remark does not refer to, neither does it contradict, the principle of reproducibility of experiments which archaeology inherited from the scientific method. Repetition as method is related to multiple "returns" to the same object/practice in order to uncover more of its epistemic content, whereas reproducibility in science means designing and publishing experiments in a way which would enable their future replication by other scholars.

as to enable experimenters to access deeper layers of relevant *technique*[72]. The lack of this component, i.e. allocating experimenters too little time to gain proficiency in the investigated motions, is arguably the weakest link in recent attempts at experimental reconstructions of historical warfare[73].

On the other hand, adopting the opposite approach, i.e. letting experimenters explore the investigated *technique* by gaining "material literacies", is time-consuming and often problematic in academic reality[74]. Having noted that, it is necessary to address one more methodological pitfall awaiting experimenting historians. Even if experimenters can dedicate significant amounts of time to focused embodied exploration of a given practice, there remains a risk that they will start producing entirely new *technique* rather than approximating the historical one[75]. Materiality holds multiple *affordances* whose perceivability and accessibility depends on who is looking – the aforementioned concept of "affordance landscapes" implies that what actions are inspired by a given object or within a practice only partially derives from their *latent structure*. Some role is also played by socio-cultural factors, such as socialisation or prior embodied experiences[76]. Hence, if experimenters are left with material objects alone or vague descriptions or depictions of practices, the best they can hope for is indeed to "reduce the number of possible solutions and exclude impossible ones"[77]. Materiality in itself cannot provide boundary conditions sufficiently sharp to nourish any sort of academic "authenticity".

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[72] Analogously, social experiments were also found lacking in that they often explore social interactions from the perspective of predefined, static variables, whereas a focus on the affordances emerging dynamically in coregulatory situations might prove more productive, see Kimmel and Rogler, *Affordances*, 197–198.

[73] For instance, a recent ambitious study on Bronze Age swordsmanship used trained fencers as experimenters, but allocated no time for practising the tested combat techniques apart from the 6 days used for conducting the tests, see Hermann, *Bronze Age Swordsmanship*. Similarly, another study in mediaeval combat techniques recruited experimenters with prior martial training, but did not check the relevance of their training to the investigated moves. Moreover, the time allocated for practice before the actual experiment was not specified, see *Late Medieval and Early Modern Fight Books,* 237.

[74] Smith and Hannan, *Return,* 44, 47. Perhaps this difficulty may be tackled by adopting crowdsourcing strategies in historical research, see Talaga, "Crowdsourcing w służbie archeologii wiedzy? Perspektywy integracji pracy naukowców i amatorów na przykładzie rekonstrukcji historycznych sztuki walki", in *Rejestry Kultury*, ed. Ksenia Olkusz (Wrocław: Ośrodek Badawczy Facta Ficta, 2019), 141–161.

[75] This would be an embodied equivalent of Hayden White's notion of "interpretative freeplay" in hermeneutics, see Hayden White, "The Interpretation of Texts", in *The Fiction of Narrative. Essays on History, Literature, and Theory*, ed. Robert Doran (Baltimore: The John Hopkins University Press, 2010), 219.

[76] On socialisation in the affordances theory, see Alan Costall, "Socializing Affordances", *Theory and Psychology* 5, 4 (1995): 467–481; synthetising remarks can be found in Heft, *Ecological psychology,* 294. The role of prior embodied experiences has been scrutinised and supplemented in a thorough literature review in Kimmel and Rogler, *Affordances*, 197, 201–207.

[77] Timo Kuokkanen, "Stone Age sledges of central-grooved type: Finnish reconstructions", *Fennoscandia Archaeologica* 17 (2000): 41.

Seemingly, therefore, we made a circle and arrived at the conclusion put forth by Burkart – that no "authenticity" of reconstruction can be claimed by experiential research in past embodied motion. This certainly holds true for those historical periods known to us only from their non-discursive material relics. But there is also gradation – written and, probably to a lesser degree, pictorial sources may be a big game changer. Obviously, as noted earlier, symbolic means (e.g. writing) alone are poor media for the transmission of embodied *technique*, but in many cases they can be coupled with specific materiality. Such is the case, for instance, of artisanal recipes investigated by Pamela H. Smith:

> A recipe, or better still, a compilation of recipes, thus indicates, in abbreviated form, the particularity, variability, and the emergent quality of material things, and of practical knowledge. Recipes, then, can effectively capture in written form – to the extent that this is possible in writing – this characteristic of emergence, as well as setting out a pathway for the acquisition of skill by means of which the emergent phenomena can be channelled and harnessed[78].

If embodied practice is described in a written or pictorial account which more or less explicitly outlines its functionand points to material objects (including the body itself) crucial to it, then a "pathway" is provided "for the acquisition of skill". A circular feedback loop can be initiated between the text, which provides the elementary boundary conditions, and materiality, which supplies the *latent structure* constitutive for the practice, thus opening the way for a gradual reconstruction, or rather re-discovering, of historical *technique*[79]**.** Such re-discovered *technique*, although a modern entity, can claim "authenticity", or maybe rather "historical accuracy", as long as it meets two criteria:

1. It does not contradict the source text;
2. It works when accurate historical materiality (objects and bodies) is replicated.

Out of these, human bodies may be considered known variables for time-periods elucidated by textual sources, since their elementary functional properties have not changed over several millennia. Hence, historians experimenting with embodiment should focus on the linguistics[80] (establishing correct reading of the

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78 Pamela H. Smith, "Historians in the Laboratory: Reconstruction of Renaissance Art and Technology in the Making and Knowing Project", *Art History* 39, 2 (2016): 219.

79 Such a circular investigation procedure has been proposed for embodied research in historical martial arts by Bartłomiej Walczak, "Bringing lost teachings back to life – a proposed method for interpretation of medieval and Renaissance fencing manuals", *Ido Movement for Culture* 11, 2 (2011): 47–54. Its further development can be found in Maciej Talaga and Szymon Talaga, "Do You Even Zornhaw? A Set-theoretic Approach to HEMA Reconstruction", *Acta Periodica Duellatorum* 6, 1 (2018): 151–181.

80 It is crucial at this point to be aware that some textual sources are easier to understand than others and to distinguish "between the symbolical and the literal levels of any text and between those texts demanding interpretation and those not demanding it", White, *The Interpretation of Texts,* 219. For a discussion focused specifically on linguistics in motion

textual sources) and things (ensuring the material milieu of their embodied research matches its historical counterpart). With these variables in check, a modern experimenter should be exposed to an *affordance landscape* closely resembling that of a past practitioner.

## Case study: embodied research in forgotten Polish folk wrestling

In order to better illustrate how embodiment may be harnessed in an (ethno) historical investigation, I will present an overview of a case study on a forgotten Polish folk wrestling tradition. It may be seen as a peculiar example, as it was in equal measure a research endeavour and a personal quest. In short, some years ago I learned that village games once played by my Grandpa, Wacław Niziński, in his youth included a thing which he called "biady"[81]. A brief indagation indicated that it was some sort of folk wrestling. Intrigued by this finding, I tried to learn more, but to no avail:

> ME: So, Grandpa, what was this "biady" you told me about last time?
> GRANDPA: This was what today is called "wrestling", but "biady" was a different style. Two men approached each other and they would make a hold by grabbing each other's back in a crosswise manner. And from there, they tried to use strength to overcome the opponent.
> ME: To throw him down, right?
> GRANDPA: Right, to throw the other down... You see, the one who was stronger or more cunning would take the right moment and win. So, that's all about it[82].

As the quote illustrates, Grandpa lacked the linguistic resources necessary to deliver a precise description of such complex motion. Due to his age, he was also unable to demonstrate it in practice. Therefore, I summoned Jakub Wrzalik and Krzysztof Janus – my colleagues and fellow martial artists – and together we designed an unorthodox research framework which we baptised "an embodied interview" (Fig. 1).

The whole procedure is still ongoing, but the period of most intensive work spanned the years 2017 through 2019, with the global pandemic ("COVID-19") putting its embodied part to a halt in early 2020. By performing our hypothetical reconstructions of wrestling techniques in front of Grandpa (Fig. 2) we managed to unlock much of his embodied knowledge, despite his inability to put it in words or demonstrate in practice. Instead, he communicated it without words – we recorded Grandpa pushing or pulling different parts of our bodies into the

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reconstruction, see Matthias Johannes Bauer, "Teaching How to Fight with Encrypted Words: Linguistic Aspects of German Fencing and Wrestling Treatises of the Middle Ages and Early Modern Times", in *Late Medieval and Early Modern Fight Books*, 47–61.

81 Grandpa grew up in a family of farmers in the village of Bronaki, Łomża district, in the Kurpie land, a then poorly-industrialised region in north-eastern Poland. The word "biady", in turn, is an archaism translatable as "wrestling" or "struggling".

82 Excerpt from an unpublished interview recorded in August 2017.

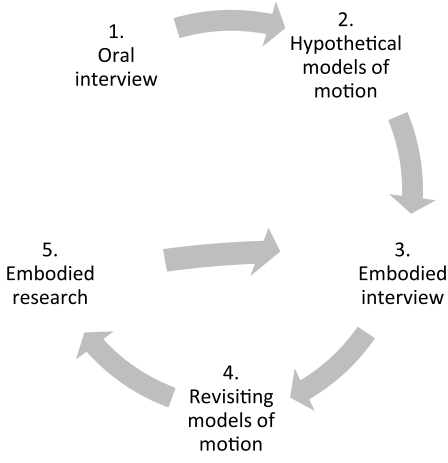


Figure 1. Study design of an "embodied interview". It was initiated with an oral interview (1) which provided basic but obscure data on the actual motions used in the "biady" folk wrestling style. This data was used to form hypothetical models of wrestling techniques which were then briefly practised by experimenters (2). Next, the hypothetical techniques were performed by two experimenters in front of the interviewee, Wacław Niziński, while others video-taped the whole encounter ("embodied interview"), especially the interviewee's verbal and embodied reactions evoked by the performance (3). New data obtained thus were used to adjust the initial hypothetical models of motions (4). Afterwards, a prolonged period of embodied research followed – i.e. regular exploratory training sessions aimed at enabling the experimenters to master the investigated motions and enhance their performance (5). Finally, the procedure entered a feedback loop in which embodied research (5) circularly led to another performance in front of the interviewee (3), then to further development of hypothetical motions (4), and again to training (5).

desired positions as well as his expressions of approval or disappointment, either verbal or through body language. Moreover, and perhaps even more importantly, he gave us direct embodied cues for our hypothetical reconstructions when his body, often unconsciously, performed tiny, vestigial versions of the movements he was narrating or hoping to see us performing – shadows of his own former wrestling proficiency. Sometimes, he would even do limited practical demonstrations (Fig. 3). These rare moments were particularly valuable, since they allowed for a direct transfer of embodied sensations constitutive for the practice we investigated. It is hard to convey this in writing, but, for instance, on one such occasion Grandpa put the "biady" crosswise hold on me and did it in such a distinct way that I still remember it vividly. Being in his eighties, he was significantly weaker than all of my co-experimenters, but his embrace was firmer and more powerful than anything I had previously experienced at our training sessions. I have been seeking this sensation ever since during our wrestling practice and by doing so, albeit not arriving there yet, I prompted my co-operators to develop a more skilful, stronger hold which also facilitated performance of the reconstructed "biady" techniques.

Figure 2. Set-up of an "embodied interview", Łomża, August 2019. In the middle, two experimenters (M. Talaga and J. Wrzalik) wrestle in front of the interviewee, Wacław Niziński. In the upper right, another co-operator (M. Margielowski, photographer) is documenting the process on film.
Photo taken by an automated camera set up on a tripod.


Figure 3. "Embodied interview", Łomża, August 2017. The interviewee, Wacław Niziński, performs a practical demonstration of the wrestling hold used in "biady" on an experimenter (M. Talaga).
Photo by B. Biernacki.

To sum up, during the project we have so far developed a catalogue of almost twenty motions which were approved by Grandpa as resembling those seen in "biady" matches back in his youth. Moreover, when the project was already quite advanced, in 2019, we were contacted by an independent anthropologist, Marcin Tomczak, who recorded additional interviews for us with other elderly Kurpie villagers who still remembered "biady" (or "bziady" as they would put it). To our surprise, they confirmed the key data provided by Grandpa and, therefore, validated the outcomes of our embodied research. Later the same year, we also learned about Scottish "backhold" – a living folk wrestling style

using a hold closely resembling the one seen in "biady". Interestingly, the repertoire of throws and takedowns practised by experts in this style were close or even identical with the ones we developed during our embodied research on "biady", despite our significantly lesser wrestling proficiency. Since no significant cultural diffusion can be assumed between the Scottish Highlands and the remote and isolated Kurpie region, these similarities seem to point to the aforementioned *latent structure* – features inherently present in the materiality of human bodies and practices which are responsible for convergence in embodied *technique* across time and space.

## Conclusions and closing remarks

Considering that this text evolved to resemble a methodological manifesto, it seems appropriate to summarise it in a series of theses forming the crux of the proposed research approach:

1. Humans experience the world as embodied beings in motion and thus kinaesthetics and embodiment – together labelled here as somatic motion – form an important part of the historical record.
2. Somatic motion preserved in the historical record – i.e. historical and archaeological sources – cannot be efficiently investigated with traditional methods used in the study of the past.
3. A new method is needed for studying somatic motion from the historical perspective and this method has to use researchers' own embodiment as a research instrument – thus it is a form of embodied research.
4. Embodied research in history cannot be aimed at repeating past *practice* (i.e. re-enacting particular actions). It should strive to understand past *technique* instead (i.e. reconstruct epistemology structuring actions).
5. To be fruitful, embodied research in history has to combine textual analysis (linguistics, iconology) with prolonged development of material literacy which unlocks *ecological knowledge* and *latent structure* contributing to the *affordances landscape* constitutive for the investigated embodied *technique*.
6. Embodied research in history performed on either material or non-literal textual sources alone yields inconclusive results. A greater degree of "authenticity" is achieved when textual and material sources are combined in a coherent manner, especially if the former communicate the function of a given motion explicitly and clearly point to the material milieu of the relevant *technique*.
7. The "authenticity" of reconstructions of past motion is of a pragmatic kind, similar to the so-called pragmatic concepts of truth[83].

[83] Such as the pragmatic theories of truth developed by William James or Charles S. Peirce, see Heft, *Ecological psychology,* chap. 1.

8. The results of embodied research in history consist of somatic motion and can hardly be presented in static (written or visual) media alone. This calls for alternative forms of documentation and scholarly outlets which would accommodate the multi-faceted epistemic layers of embodied practices. This, however, is beyond the scope of this essay[84].

The above observations form a coherent whole which I propose to call "archaeology of motion". The choice of name stemmed from several reasons. First of all, I see embodied research as a holistic exercise in earthy yet creative imagination and "disciplined use of imagination is the highest function of the archaeologist"[85]. Another inspiration comes from the looking "as an archaeologist looks" described by Georges Didi-Huberman[86] – a mode of perception combining movement in space with heightened sensitivity to the past embodied in the materiality of the present. Finally, I wanted to make a reference to Foucault's "archaeology of knowledge" and highlight that somatic motion encompasses not only spatial and kinaesthetic configurations, but also political, epistemic, and emotional – "[t]o summon sleep, to arouse anger, or to stimulate joy are not actions to be taken directly, but they are certainly within the realm of embodied technique"[87]. Likewise, such embodied practices as medieval German *Zornhaw* ("wrathful strike")[88], which either reference or evoke anger in the practitioner, may reveal lived affective experiences and cannot be fully grasped unless through somatic engagement. Therefore, investigating past motion **through** motion can potentially "unearth experience from the thick sedimentary strata of language covering it"[89] – this alone, to my mind, would suffice to justify the proposed "archaeology of motion".

## Authorship disclaimer

This text was written in its entirety by the first author, and so a first person singular is used whenever "the narrator" surfaces in the story. However, two other persons were deeply involved in the case study presented herein and deserve to be called "researchers", even if this would mean embodied researchers. Hence, they are featured as co-authors.

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84 Nevertheless, it bears noticing that this avenue is already followed by editors of an innovative scholarly periodical – *Journal of Embodied Research*, https://jer.openlibhums.org/.
85 Oabert G. S. Crawford quoted after Coles, *Archaeology by Experiment*, 17.
86 Georges Didi-Huberman, *Bark*, transl. S. E. Martin (Cambridge: MIT Press, 2017), 105.
87 Spatz, *What the Body can Do*, p. 35.
88 Talaga and Talaga, *Do You Even Zornhaw?*
89 Ankersmit, *Sublime Historical Experience,* 14.

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