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Decolonising the archaeology of indigenous artisanal gold mining in Eastern Zimbabwe

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ABSTRACT

In this paper, I will look at how I utilised archaeological ethnography as a methodology to study ancient and contemporary indigenous gold mining practices in Eastern Zimbabwe. Subsequently, I will present an archaeological field research that I undertook at Nyahokwe and Saungweme sites between 2016 and 2017 and move on to show how material culture recovered was collaboratively interpreted in conversations with contemporary indigenous gold miners. I argue that by using archaeological ethnography as a field methodology that privileges multivocality, this ultimately decolonised archaeology's underlying politics which is protected by expert hegemonic discourses. During the field study at Nyahokwe and Saungweme sites artisanal miners popularly known as makorokozas revealed their localised understanding of crucibles and hammerstones that were recovered during both archaeological excavations and surface collections. Thus, used as decolonised methodology, archaeological ethnography allowed for multiple voices to be embraced in archaeological knowledge production.

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Archaeological ethnography; decolonisation; chains of operation; Eastern Zimbabwe; Indigenous artisanal mining; *makorokoza*; ancestors

Introduction

This paper is on the practice of Indigenous artisanal gold mining around Nyahokwe and Saungweme archaeological sites in Eastern Zimbabwe with a sharp focus on the circulation of Indigenous knowledge and skill in both contemporary and historical periods. In this case, the localisation of archaeological practice involved a dialogical action with Indigenous local miners. Diverse perspectives emerged in the interpretation of material culture with more than one significance being brought out from the context in which this research was undertaken (Vilches et al. 2015). My point of departure is around presenting the argument that contemporary gold mining practices can inform our understanding of the past through the use of a holistic anthropological methodology called archaeological ethnography. I will demonstrate how I applied this hybrid multi-methods approach to understand both ancient and contemporary mining processes at Saungweme and Nyahokwe archaeological sites. Archaeological ethnography is presented in the paper as a decolonized methodology which studies the past and the present in relation to one another at these two archaeological sites. Subsequently, the paper feeds into growing debates on decolonising archaeological knowledge but does so differently in that unlike merely discussing how to decolonise knowledge,

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I present empirical descriptions of how voices of Indigenous contemporary mining communities can be embraced in interpreting the archaeological record. I argue that narratives of the past generated by such communities can be as valid as those generated by archaeologists. This is taken against the problem that in Zimbabwe, despite some excellent early work on ancient gold mining by Summers (1969) and Swan (1994) the lack of ethnographic evidence has prevented further understanding of mining processes. The contribution of this paper is to fill in missing information from those earlier studies. This is because the current rise of artisanal gold mining, processing and refining provides a rich ethnographic model for understanding ancient mining. The fact that mining is still practiced today in close connection with Indigenous African ritual and religious activities also provided valuable evidence for the use of archaeological ethnography as a methodology. Decolonising archaeology entails communicating, listening and making choices based on both our own standpoints and those of Indigenous communities (Supernant and Garry 2014).

Archaeological background

The two archaeological sites that I will discuss in this paper are Nyahokwe and Saungweme. Nyahokwe constitutes part of the Nyanga complex in Eastern Zimbabwe which is thought to represent an agricultural society of industrious farmers and stock raisers whose culture developed from about AD1300 to the nineteenth century (Burrett and Logan 2016; Chirawu 1996, 1997; Mupira 2010; Soper 2002, 2006; Sutton 1988). It is located 23 km northwest of Nyanga town at S 18° 08′ 31.3″ E 032° 41′ 18.4″, Elev. 1555 m. Soper (2002) carried out extensive research in Nyanga and argued that the modification of the land was a result of what he believed were pre-colonial agricultural practices. The ancient terraces in Nyanga cover an area of more than 8000 square kilometres both in the lowlands and the highlands. Terraces were constructed mostly within dolerite rich areas which the ancient farmers preferred because of their fertility levels (Love and Walsh 2009). However, in other parts, for example at Nyahokwe, granite rocks were used to construct terraces. The size of the terraces ranges mostly between 2 and 3 m apart and 1 m high. It has been argued that the technique of terracing was meant to capture and prevent thin mountain soils and sediments from being washed downslope. The presence of quartz fragments has been identified with the act of clearing stones from the fields during land preparations (Garlake 1966; Love and Walsh 2009; Mupira 2018; Sutton 1984). The presence of quartz fragments has also been linked with gold mining theories which I will explore later in the paper.

Meanwhile, the Saungweme site is located on an extensive mountain range near St Augustine's Mission in Penhalonga at S 18° 51′ 18.9″ E 032° 38′ 32.5″ Elev. 1259 m. This site is surrounded by several contemporary small-scale gold mines. On top of the mountain there is a small free-standing wall constructed between two rock boulders. I conducted an extensive foot survey and surface collection at this site during which I collected objects possibly associated with pre-colonial gold mining and processing. Surface surveys were used as a preferred choice of data collection at Saungweme and hence excavations were not carried out here. This choice was influenced by the surface density of archaeological remains which was considered sufficient to address the research questions.

The stone walls at Nyahokwe and Saungweme sites were possibly constructed as fortified protected cultural precincts that controlled the mining and processing of gold in the past. I posit here that the fortification was a deliberate exclusionary strategy meant to keep strangers away in particular the predatory Portuguese and Arab traders from the gold mining areas. The topographical selection of these sites and the choice of mountains suggest that they offered ritual protection to a range of secular and sacred activities. In essence, something was going on behind these walls and from observing this spatial arrangement I argue that these were protected, secured and sacred cultural precincts designed for metallurgical operations linked to gold production. This probably explains why the ancient artisans at these sites had to put so much effort into stacking together huge stone blocks into uniform walls on mountain tops. I would argue that these were multitemporal metallurgical sites built to provide ritual protection associated with indigenous knowledge

and skills required in gold mining. According to Thornton (2017), ritual practices that also require protection include circumcision, healing, trance-dance as well as manufacturing processes such as metals, bead making, and preparation of medicines, amulets and other paraphernalia. Furthermore, the stone structures at these sites occur largely on ultramafic rocks and soils which are especially rich in metals, especially iron and gold. By adopting some ethnographic models from iron smelting, a lot can also be said on the spatial patterning of gold mining and processing precincts as indicators of cultural aspects of production. Therefore, the spatial separation of the gold processing activities from habitation sites across Southern Africa has largely been interpreted as a response to ritual requirements of the work (Childs and Killick 1993). Chaîne opératoire was used as scientific methodology to unpack the sequences of mining activities at these two sites. In addition to this method, I carried out an ethnography of contemporary artisanal mining through participant observations and interviews with *makorokozas*. This provided a rich exploration and insights into material cultural patterns by which I could interpret the past.

Chaîne opératoire and data acquisition methods

The chaîne opératoire is a key analytical concept that was utilized to investigate the mining and processing sequences of gold both within the past and present settings at Nyahokwe and Saungweme sites. It placed operation sequences at the core of investigation and also signifies an ontological turn from the traditional archaeological cultures approaches underwritten by typological methods. The chaine operatoire was used as both a methodology of the anthropology of techniques and an analytical tool. It invokes the necessity of studying each step of a particular productive process by looking at the social and cultural influence within this step (Stollner 2014, 134). It was also a suitable approach in its ability to embraces the multiple connected relationships between the material culture recovered at the sites and interpretations that were drawn from contemporary ethnographies. In the chains of operation, social interpretations which pay attention to cultural choices and social beliefs of the craftsmen are viewed as equally important relative to the technical and functional explanations (Torres and Rehren 2009). A number of ritual beliefs were highlighted by *makorokozas* during the ethnographic engagements and these were used in the interpretation of material culture and their occurrence within the chains.

Therefore, infused with phenomenological concerns this method served as a conceptual framework for understanding the meaningful links and chains between artisans and objects they used in various metallurgical practices at these sites. I called this method the chains of operation according to usual archaeological usage and I analysed complex gold mining technologies that involved both rituals and technical aspects practiced by artisans in the past at both Nyahokwe and Saungweme. Thus, I considered how artisans in the past ascribed values to materials and objects and the processes and social contexts in which these were produced (Brysbaert 2017). This approach provides the impetus for step-by-step description and reconstruction of production processes rather than simple description of cultures or artefacts (Torres 2002, 30). Apart from the chains of operation, the research used multiple methodologies by bringing together archaeological, historical, and ethnographic data sets to understand the knowledge and practices associated with indigenous artisanal mining. Therefore, standard archaeological and ethnographic methods used include: excavations, interviews and participant observation. Excavations were collaboratively carried out with the assistance of *makorokozas* and at each site a 1×3 m test trench was excavated (See Figure 1).

Material culture recovered from the collaborative excavation exercise comprised crucibles, furnaces, slag, tuyeres, charcoal, pieces of quartz and hand tools such as hammerstones. Meanwhile, interviews with *makorokozas* who were mining around the sites, provided interlocutor derived data. *Makorokoza* are contemporary gold miners who are working close to these sites and with whom I had dialogical conversations about their mining knowledge and how it is related to the archaeology of the area. Prior to commencing the research, I informed them about the collaborative nature of this work and my positionality as an archaeologist seeking to democratise knowledge production. Subsequently,

Figure 1. Collaborative excavations at Nyahokwe site.

the research was modelled in such a way that the interpretation of archaeological evidence from Nyahokwe and Saungweme benefited a great deal from ethnographic analogies derived from the multivocal conversations. In turn, ethnographic analogies generated testable hypotheses which I used to interpret a range of archaeological materials. According to Lane (2011, 17) 'there is now ample ethnographic evidence that people throughout the world frequently draw on the material traces of previous inhabitants in their construction of historical narratives about their past … ' Hypothetically speaking, it can be posited that ancient artisans at the Nyahokwe and Saungweme sites processed ore within the secured stone enclosure and retired home after work. This view was strengthened by the absence of household material culture at the sites. No evidence of house floors was recovered during the excavations. The prevalent material culture that was found includes several fragments of furnaces, beads, potsherds and hammerstones. In using ethnographic analogies I was also aware of the fact that some of the oral testimonies from *makorokozas* might have been diluted and influenced by well-known and popular accounts that appear in Portuguese written records (Figure 2).

The interviews themselves were multi conversational in nature in which *makorokozas* elaborated on Indigenous gold mining practices and knowledge systems that challenged conventional archaeological standpoints. These interviews were not structured but were premised on the life history or biographical approach. Interlocutors amongst *makorokozas* were selected based on their mining knowledge and their willingness to share their individual experiences. Throughout the interviews, the goal was to allow *makorokozas* to share as much information as possible, unguided and in their own language. It is important to stress that archaeological methods used were not only concerned with the past but instead were applied to a kind of contemporary archaeology of material culture in the present through the application of a hybrid methodology called archaeological ethnography. Guided by the understanding that objects from excavations were not things themselves but rather representations of ideas, the chains of operation was applied as an analytical methodology that considered the critical role of agency and structure in both pre-colonial and contemporary gold mining settings.

Figure 2. Aerial photograph showing a pit structure and a circular stone enclosure at Nyahokwe Site.

A decolonised community archaeology practice

Although archaeology has always been concerned with studying the distant past, the ethnography of contemporary gold mining societies in Eastern Zimbabwe demonstrates that communities can effectively live with the past and with their ancestors. This shapes how they relate to and use archaeological sites. Such communities have a symbolic dynamic cohabitation with the very same people from the deep past who, as archaeologists, we think we will be trying to study, reconstruct and understand. In this regard, I observed that contemporary gold miners (*makorokozas)* could be presented as theorists of the past and its significance in the present. In their own ways they are theorists who look at surviving material culture and subsequently develop interpretations about how their ancestors used to mine gold (Chipangura 2019, 2020). Therefore, an inclusion of indigenous values and local miners' knowledge in archaeology provides a key means of decolonising and correcting problems created by its underlying colonialist logic and political economy (Colwell 2016, 117). For a long time, archaeology in Africa has remained dominated by practices that ignore consultation and engagement. Such practices are strongly rooted in colonial paradigms wherein research questions come from the top (Schmidt 2017a, b; Schmidt and Pikirayi 2016). However, as Schmidt (2017b) rightly pointed out, communities are increasingly becoming aware of their rights and no longer accept arrogant archaeological practices that ignore locals in designing and executing projects.

Through involving contemporary indigenous miners in this research, I was in consensus with Atalay's (2006, 5) view that community based participatory research provides a method for communities and archaeologists to work together to pursue research design that benefit them as equal partners. Using archaeological ethnography as a decolonised method means that there is continuous

engagement in which archaeologists and community members collaborate, in defining the questions, methods and outcomes of a given project (Colwell 2016). Many questions have been raised on whether these are descendant communities with a direct historical association to the archaeological sites under investigation. However, I borrow from Schmidt's (2017b, 397) sentiments that 'there are countless examples where communities use ancient sites for ritual and other purposes without tracing any cultural or biological links to these ancient locales.' This same view was applied in the research by interviewing *makorokozas* who have been working in the area for a long time and are now considering themselves as local inhabitants. Therefore, what matters in producing decolonised archaeological knowledge is not so much about the composition of communities but rather a sense of belonging that such communities possess, which is a powerful reason for partnerships (Schmidt 2017b). Sharing power with Indigenous communities in archaeological knowledge production can pluralise, democratise and decolonize relations (Schmidt 2009a; Onciul 2015). However, there is a paradoxical duality on the role of archaeology in the post-colonial debate. Whereas its old scientific systematic practice embodied colonial narratives it also has the ability to decolonize the history of former colonial states (Onciul 2015). Looking back, the development of archaeology in Africa as a practice coincided with the spread of colonialism and imperialism and became part of a system that validated and justified oppression, dispossession and racial prejudice. As aper of this, the study, collection and presentation of local cultures were seen as a key aspect of exerting power and control over locals (Dubow 1995; 2006; Foucault 1998; Lord 2006; Said 1985). To decolonize archaeological practice therefore means a proper representation of people spoken about rather than listened to. Instead of merely consulting communities to extract information from them – which has been the case with most decolonised archaeological projects – my approach was based on democratised shared authority with *makorokozas*, which resulted in the collaborative generation of new interpretations of the material culture of precolonial gold mining practices.

In recent years, decoloniality has been propounded as an alternative epistemological approach to deconstructing Western hegemonies in the production and circulation of knowledge (Mignolo 2009; 2011; Ndlovu – Gatsheni 2015). This is framed within the understanding that collecting practices of the nineteenth century were always associated with violence and dispossession and that archaeology had, and still has, a role to play in the colonisation of knowledge and being (Mignolo 2011). Decoloniality as a concept refers to the dismantling of power relations by the conception of knowledge that is multi-vocal in its recognition of formerly ostracised ways of thinking and doing by Indigenous communities (Ndlovu – Gatsheni 2015). While the call to 'decolonise' is not necessarily new, in Southern Africa the current fervent emergence of movements that use this term or approach in challenging the established structures of power is something that is indeed fascinating. It calls for attention and demands that established disciplines rethink their strategies in dealing with the marginalised, opening spaces for increased inclusion and acceptance of difference. In his seminal work on decoloniality, Walter Mignolo strongly argues that disciplines such as archaeology have always taken a central role in 'reproducing the rhetoric of modernity, and the logic of coloniality' and he proposes what he calls 'epistemic and aesthetic disobedience' (Mignolo 2011, 72; see also Mignolo 2000, 2009). The suggestions highlight the importance of creating spaces for local knowledge, what some have termed 'knowledge at the borderlines,' 'disciplines on the frontier' or 'information at the margins' (Gnecco 2013; Haber 2012). Incorporating knowledge and experiences from the previously marginalised local communities has a potential for freeing archaeology from its scientific tropes that are not collaborative. In the same breadth, it has also been argued that archaeology can be decolonised by a deliberate diversification of knowledge by moving away from the dictates of western rationalism through disobedient practices (Message 2019; Sinamai 2020).

Community collaboration can be regarded as a disobedient practice which makes archaeology relevant to and more representative of local concerns (Bruchac 2014). Community archaeology is a socially and politically self-conscious mode of research that incorporates different cultural perspective in the interpretation of the past (see Brady and Crouch 2010; Colwell -Chanthaphonh and Ferguson 2008; Smith 2007). It is also a dialogue regarding the participation of Indigenous communities

and the diversification of spaces in which archaeological discourses are circulated (Matsuda and Katsuyuki 2011). Community archaeology is regarded as a new way of doing archaeology that is situated in the present and is informed by a critical reflection which recognizes that archaeology as a practice is intertwined in a fabric of social and political relations (Vilches et al. 2015, 375). Against this background, decolonised community archaeologies offer positive alternatives to colonial era theories by exploring African quests for identities that speak to local knowledges and also make the archaeological practice relevant to individual and collective well-being (Schmidt 2009b). Elsewhere, Smith and Wobst (2005, 394), argue 'an archaeology shaped by indigenous knowledges is capable of decolonising archaeological theory and practice'. Indigenous knowledge is essential because it fills in for the limitations of western knowledge by coming up with theories of its own (Sinamai 2020). Decolonised community archaeologies promote an understanding of how to listen and pay attention to subaltern voices and give room for more inclusive histories (Bugarin 2009). Thus, in this research there was no prioritisation of views from one particular group and this was achieved by allowing *makorokoza* to speak about the sites in various languages and varied perspectives.

Similarly, Segobye (2009) argues that in southern Africa, the use of local history and living heritage to inform the archaeological past provides an active engagement between archaeologists and communities. Such archaeological dialogues also ensures that people who have been subjects of inquiries for a long time are now equal participants in the production of archaeological knowledge (Kusimba 2009; 2009a,b; Segobye 2009). Using archaeological ethnography as a decolonised methodology is one way of recognising that local communities are active knowledge agents possessing their own subaltern epistemic understandings and positioned readings of hegemonic archaeological discourses (Bugarin 2009; Haber 2012). Instead of seeing archaeology as a clear and irrefutable producer of knowledge. calls are being made for the inclusion of multiple voices from community members. In so many ways, archaeologists are also being challenged to give up their authoritarian voice of control and enable communities to interpret material culture according to their own understanding derived from implications on their everyday lives. Decoloniality itself has been propounded as an alternative epistemological approach to deconstructing hegemony of Western/European perspectives in the production and circulation of knowledge (Mignolo 2009; 2011). It calls for attention and demands established disciplines to rethink their methods of dealing with the marginalised, opening spaces for increased inclusion and acceptance of difference. For archaeology this move to include other knowledge systems is a radical epistemological invention of the discipline which still regards materiality of things as more important than intangible social biographies (Sinamai 2020). Essentially a decolonised archaeological practice recognises Indigenous knowledges systems and their emphasises on the duality between people and their natural environment as well as collapsing tangible – intangible binaries (Sinamai 2020).

An archaeological ethnography of artisanal small scale gold mining

Eastern Zimbabwe has been historically labelled a territory for the Shona speaking people where many dialects were spoken. Today the same area is occupied by diverse groups of Shona speakers and outsiders from as far as Mozambique, Malawi and Zambia. Although the archaeology of the area has often been attributed to the ethnic Shona linguistic category, there is no actual evidence for that (Beach 1980). What we are ethnographically aware of is that there are different languages and dialects spoken today because of considerable movements and migrations. Even though the people in the study area are often discussed under the label Shona, the language itself is heterogeneous. However, it is also probable that ancient autochthons were ancestors to today's Shona population and that they inhabited the area for generations. In another example of how the concept of indigeneity has been deployed, Keitumumetse (2014, 79) argues that in Botswana, San communities are the original indigenous inhabitants of the land and possess distinct social, cultural and economic characteristics as compared to other communities. However, in this research adopting a decolonial methodology entailed embracing multiple perspectives without necessarily worrying about

ethnicity and other cultural tropes that are associated with groups of people. This is because differences are not underwritten in cultures, beliefs, representation or in symbolism, but instead differences are a result of existence and participation in alternative realities (Alberti 2016). Furthermore, as Hage argued, relationality between multiple bodies has the potential to unlock multiple realities (Sinamai 2020; Schmidt 2009a). All these sentiments capture how archaeological ethnography as a decolonised methodology has a particular interest in democratic and inclusive practices that involve developing collaborative relationships with communities. Archaeological ethnography as a methodology supports the empowering of local communities in making critical decisions on research directions, questions and priorities (Marshall 2002). This method is closely related to community archaeology which also restructures power relations and recognizes political rights of communities by allowing them to have a role in directing how research about their lives (past or present) is conducted (Clarke 2002, 252). An inclusion of Indigenous community knowledge therefore provides a key means of decolonizing and correcting problems created by archaeology's underlying colonialist logic and political economy (Colwell 2016, 117). Archaeological ethnography is a transdisciplinary, transcultural space for critical engagement and dialogue which enables an understanding of local unofficial contemporary discourses and practices to do with archaeological sites (Hamilakis, Anagnostopoulos, and Ifantidis 2009b, 284). In it numerous perspectives and values are brought together to enlarge a shared understanding of the past (Colwell 2016). Archaeological ethnography thus de-centres archaeological interests by focusing on building relationships from local narratives that do not have to always revolve around or relate to archaeological sites and archaeology, but narratives that present the contemporary local setting as something of equal interest to archaeological narratives (Stroulia and Sutton 2009). The difference between archaeology and archaeological ethnography is essentially methodological in that the former uses scientific analysis to interpret material culture, whereas the latter is a hybrid approach which gives room to the use of stories and narratives from non-experts (Hamilakis 2016). As a result, archaeological ethnography can work best as assemblages of multiple approaches, objects, texts, technologies and expert knowledges gathered around a specific problem being addressed and studied, which in turn is informed by ethnographic engagements (Harrison 2016; Samuel 2011). It is also a holistic anthropology which is improvisational, context dependent and a decolonised methodology that embraces the so called unofficial narratives from non-experts (Castaneda 2008; Colwell 2016; Haber 2016; Meskell 2007).

Archaeological ethnography was utilised at Nyahokwe and Saungweme sites as a decolonized methodology that was mutually collaborative, reflexive, involving the sharing of information with *makorokozas* on gold mining knowledge and practices (Chipangura 2020). It recognised the dialectical relationship between past and present and between object and subject (Hodder 2007). As such, it was a participatory exercise that partitioned responsibility with *makorokozas* in the research area through sharing of knowledge and engaging with inequalities in archaeological knowledge production (Colwell 2016; Lillios 2011). Previously, local communities were marginalised from making decisions in archaeological exercises in this area, as they were merely consulted as passive informants with no input on actual knowledge production., While most heritage and archaeological practices distance themselves (Sinamai 2020; Schmidt 2009b), this collaboration aimed to capture the connection between the landscape and communities. It generated dialogue around archaeological knowledge and diverse interpretation of the material culture and local understandings of gold mining in contemporary perspectives. Archaeological ethnography was also used as a space of thinking, engagement, dialogue, collaboration and intervention rather than a scholarly practice at the interface of archaeology and anthropology (Hamilakis and Anagnostopoulos 2009a, 83). Engagement and dialogue was part of the process of sharing authority with the community in interpretating material culture from the collaborative work at Nyahokwe and Saungweme sites. This is different from traditional archaeological approaches which had been used by other researchers in the past in which material culture analysis was shored up by a scientific ethos of classifications, categorisations, typologies, documentation and conservation. As argued elsewhere by Sinamai (2020), western scientific methods and knowledge are prioritised in archaeology at the expense of

Indigenous knowledge systems which are seen as appendages with very little information. However, in this study, scientific methods were not entirely discarded but were made to speak with Indigenous systems of knowing, derived from community understandings of the material culture. Consequently, archaeological ethnography revealed how present modes of gold mining and processing influence the ways in which contemporary communities perceive and remember the past. It was both a reflexive and detailed exposition of social practices that undergirded contemporary gold mining in relationship to the material culture of the past.

For example, narratives from *makorokozas* working around Nyahokwe revealed a different perspective from what is archaeologically regarded as the agricultural uses of terraces and associated ancient infrastructures. According to them the terraces were used as gold mining infrastructure and there seems to be a continuity in practice as was seen from how they are still utilising similar techniques in contemporary mining. The pit structures which have been archaeologically interpreted as cattle pens were regarded by *makorokozas* as gold washing tanks of the past (see Figure 3*). Makorokozas* are small scale gold miners who are mining very close to these archaeological sites. Most of them are locals driven into mining because of economic hardship. Perennial draughts in the research study triggered a gold rush as local communities found an alternative mode of livelihood in mining. As locals they possess different kinds of knowledge on the use of these sites, based on oral and written records which have been passed on from generation to generation. The proximity of both Nyahokwe and Saungweme to the Mozambiquean coast also gives the local community the belief that gold that was mined by their ancestors was traded to Portuguese posts in particular at Masekesa and Sofala. Portuguese written records, which seem to have influenced many of the oral testimonies that the locals were narrating, show that from the prehistoric period, the Zimbabwean plateau has also been known to have fed the East African trade route with gold. This route was controlled by Islamic and Arab traders between the twelfth and thirteenth centuries AD (Ellert 1993). Kilwa was famed as the main trading centre on the East African coast that benefited from gold

Figure 3. A dialogical conversation with makorokozas mining gold near Saungweme site.

coming from the Zimbabwean plateau. It was in the second half of the thirteenth century, that Kilwa took control of trade from Sofala and subsequently experienced an exponential growth in wealth (Huffman 1974). Exploitation of gold during this period was done within the alluvial deposits of the Nyamukwarara, Mutare and Odzi rivers.

In many ways, using archaeological ethnography as a methodology recognises that local communities are active knowledge agents possessing their own subaltern epistemic understandings and positioned readings of hegemonic archaeological discourses (Haber 2016). It allows for an open archaeological practice and thought that is transformative and in conversation with local knowledge (Haber 2016). In addition, it is a multilocal, hybrid field method that investigates the creation of knowledge by creatively working with living contemporary communities with a focus on the material culture of the past and concerned with deciphering the micro-politics of archaeological practice (Meskell 2009, 9). According to Buchli and Lucas (2012, 8) the archaeological record can be characterised within two ontological conceptions. The first, regards the record as comparable to a contemporary material whereas the second treats it as fundamentally historical. This research took the first turn by looking at material culture generated by contemporary *makorokozas* and relating them to the archaeological techniques of mining at the Nyahokwe and Saungweme sites. How then do archaeologists manage to weave monumental accounts and stories of the past from just objects, without any knowledge of the subject? (Lucas 2012). The answer to this question lies at the heart of archaeological ethnography, which straddles across time but uses contemporary ethnography to understand archaeology and at the same times uses archaeology to understand contemporary ethnography. Therefore, admittedly, although we can never directly know the gold mining and processing past of Nyahokwe and Saungweme, inferences were drawn via interviewing *makorokozas* and through participant observations.

Mining legends; historical perspectives and the story of the 'German miners'

The Penhalonga area where Saungweme site is located has a long history of gold mining which predates the establishment of large-scale mines and locals are aware of these histories mostly through oral accounts that have become legendary. In one dialogical account, Ziki (pseudonym) spoke about the history of mining in the area from a local oral perspective. However, he gave a conflated account on the early mining by Indigenous Shona people and the arrival of German miners in the area (see Figure 3). He said: 'when we came here, I heard that *majerimani* (Germans) used to mine in this area and were using big stones to crush the gold ore. *Vaikuya* using *guyo nehuyo* and would extract their gold from there' (they used hammerstones on granite surfaces to grind and pulverise the ore). In fact, what Ziki said is partially correct, based on analysing the lithic tools he mentioned although they were not used by 'German miners' but rather by Indigenous Shona speaking people who had begun exploiting gold from as early the twelfth century (Phimister 1974). The Germans should have arrived in the country around the nineteenth century towards the time when Zimbabwe became a British colony.

Makorokozas have popularised the narrative of the 'German miners' in Penhalonga and elsewhere where gold is mined in Eastern Zimbabwe with the belief that most mines were once worked by these Germans in the nineteenth century. The material evidence in the form of tools frequently recovered by *makorokozas* in old, abandoned shafts also seems to be strengthening this belief. At Chinyanjera mine, which is located just two kilometres south of Saungweme, German mining tools were found in a 50 m abandoned shaft. I sent images of the tools via email to Martin Straßburger – a German anthropologist specialising in mining archaeology – to authenticate their provenance and confirm the story of the 'German miners'. He concluded that although the tools are similar to some found in mining museums in Germany, they were made in England around the sixteenth century. During the dialogical engagements most *makorokozas* had a good knowledge of these tools and explained how strong they were. This view was expressed by Bidza, a local miner working close to Saungweme site who said:

> The Germans were very good miners judging from the tools that they used which we sometimes come across in these abandoned shafts. If you happen to come across an old pick made by them you will be lucky because you can use it forever. It's made from a very strong metal that is not brittle and you will only dispose the pick after years of use (Bidza, Chinyanjera mine, Penhalonga, 2016).

The story of the Germans was also repeated by Kwinji an artisanal miner working at Nyadenji mine near Nyahokwe site, he said:

> I don't think this area is a virgin land**.** We have heard of stories about German miners who left several tunnels after finishing the gold. Apart from the tunnels, the Germans also planted pine trees in areas where they were mining so it's very easy to identify these spots. These trees we believe marks all places that have gold in this area. For instance, there is *mutsurungunu*, fig, pines and *mupomboshori* trees; all occur in gold mining areas. If you look closely, you will see that the trees follow a certain line and extend from Nyadenji mountain where we are working down up to Mutanda range (Kwinji, Nyadenji Mine, Nyanga, 2016).

Gold mining in Eastern Zimbabwe has a long history with successive settler groups referred to in the accounts that were given. Living legends and oral accounts supported by historical documents show that the Portuguese were only interested in trading and not necessarily in mining or taking over (Kritzinger 2007, 2012a, 2012b). Miller, Desai, and Thorp (2000) support this view and argue that Portuguese traders penetrated the area at the beginning of the sixteenth century AD to locate the gold sources and subsequently took control over trading from the Islamic and Arab traders. Several trading *feiras* were thereafter established by Portuguese traders, particularly at Masekesa, Chipangura, Bvumba and Mutare to facilitate the procurement of gold from Manyika kingdom (Mudenge 1988). In the trade system, the Manyika, who were the Indigenous Shona speaking people, supplied gold, iron and ivory, while the Portuguese brought cloth, 'glass beads' and porcelain (Chirikure et al. 2017). Therefore, the history of gold mining in this part of the country had various colonial players referred to by an interlocutor:

> This mine called Rezende was first worked by the Indigenous people a long time ago. The British only came in 1891 that is when the indigenous mining was stopped. Cecil John Rhodes negotiated a mining treaty with chief Mutasa and established Rezende mine. Since that time, it has been run by different companies and today it is now called Redwing Metallion Gold. The Portuguese have been here, the Germans, the South Africans as well as the Russians. The evidence is there on the ground that some shafts were blocked by the Germans who sprayed harmful chemicals when they left as a way of trying to prevent subsequent mining by locals. *Makorokozas* cannot extract gold in these spots and even if they try it is difficult to process because they will need another chemical to dissolve the initial contamination. So, if they don't know the chemical used to counter the spray, then it means that the gold cannot be extracted. It is like a solid rock with no gold in it. I think their intention was to come back and continue mining and that is the reason why they sprayed this chemical. Which is why I said there is no proper account of what really happened to the Germans miners. What I also know is that in the past Chief Mutasa used to control the mining and that all the gold was passed on to him by his subjects (Baba Makamure, Penhalonga, 2016).

Baba Makamure (pseudonym), is a respected elder in Penhalonga who previously worked for the then Rezende mine (now Redwing Metallon Gold Mine) for 30 years before he was laid off in 2002 when the company decided to downsize its mining operations. In fact, Rezende mine where Metallon Gold Mine is situated, was established on top of ancient gold adit known by the locals as *Utare*, meaning rock of gold (Ellert 1993). Narratives of precolonial gold mining that are based on local legends are not unique to Zimbabwe. In Ghana, local inhabitants possessed technical knowledge of mining gold long before the arrival of the Portuguese in 1471 (Mensah 2016; Werthmann 2007). The Ghanaian small scale gold mining industry is well over 2000 years old with vestiges of ancient mining having been found that date as far back as the sixteenth century (Hilson 2002, 63). Thus, operations of *galamesys* (artisanal miners) in Ghana show that they have strong cultural ties with the land and are using techniques almost identical to those of their ancestors. Commenting on their technical know-how Hilson (2002) also posits that their absence in an area was regarded as an indication that gold mineralisation was poor. *Galamesys* are thus superior 'pathfinders' of gold and most large-scale miners would prefer to peg their claims where there are existing small-scale mining operations.

Historically in Zimbabwe, this was the case as well, -as explained by Baba Makamure who said: ‘most large-scale gold mines were established on old gold workings – white people only gave our forefathers some blankets as a token of appreciation when they were shown these ancient mines’. Thus, it can be argued that processing methods in artisanal mining have not significantly changed over years and cannot be divorced from traditional manual mining methods inclined to the use of simple non-industrial implements such as shovels, picks, axes, pans, chisels, hammers and stone tools. Stone hammers made from fine grained materials such as dolerite and green stone were found in the archaeological record and were used during pre-historic gold mining (Phimister 1974; Summers 1969; Swan 1994). Consequently, Miller, Desai, and Thorp (2000, 97) argue that ‘informal artisanal gold mining persists to this day using techniques that are not substantially different from those recorded in early documents and the archaeological record’. This view is also supported by Gibb (2006, 42) who argues that for thousands of years, indigenous gold mining of the precolonial period in its very various guises has been an important building block of societies around the world, contributing to the spread of trade routes and the growth of empires. The knowledge of mining itself then was Indigenous because the techniques they were using to mine gold were drawn from stone tool craftsmanship. The mining knowledge exhibited by *makorokozas* and how I embraced their narratives, significantly illustrates the view that archaeology can be socialised by the adoption of different ways of knowing and doing. A commitment to social justice means that colonial violence which was at the heart of archaeological discourses in the past is disrupted by the inclusion of previously marginalised Indigenous communities in telling their own stories (Chipangura and Mataga 2021)

The Nyanga complex debate: agriculture or mining?

There is an ongoing debate on the functions of pre-colonial remains of the Nyanga complex (see Figure 4). This complex comprises of terraces, ridges, water furrows, pit structures, stone enclosures, furnaces, hammerstones, dolly holes, furrows, quartz piles and ridges (Chirawu 1997; Mupira 2018; Soper 2002; Sutton 1984). There is one group that argues that these archaeological features were used for agriculture and cattle keeping, whilst another group thinks they were used for extracting and processing gold (Chipangura 2019; Kritzinger 2008). New terraces were constructed as soon as the older soils became infertile until eventually much of the landscape was left with an imprint of this activity (Sutton 1984). Sutton (1984) thinks that it is the labour input exerted toward the construction process itself that should be regarded as intensive and not necessarily the farming practice or the yields thereof. Ancient terracing for agriculture is further supported by the occurrence of cultivation ridges *(mihomba)* designed to retard run off and aid percolation and are found all over Nyanga (Chirawu 1997; Soper 2002). The ridges are commonly 7–10 m wide and 30–70 cm high and run for several hundred metres upslope from streams. A root crop called *tsenza* is believed to have been cultivated on these ridges. Meanwhile, pit structures occur in groups in close proximity with the terraces and are thought to have been used as cattle pens for dwarf cattle. According to Soper (2002), the pits were residential units for people and their stock, with dwarf cattle stalled in the pit thus sheltering them from cold winter winds and theft. Dwarf cattle were permanently stall-fed because their prime purpose was to produce the manure which was essential for farming poor soils on terraced hills. Leached soils on the terraces were fertilized with manure that was obtained through impounding slurry effluent flushed out from the pits where the dwarf cattle were kept (Burrett and Logan 2016; Soper 2002, 2006; Sutton 1988). Flushing manure was made possible using furrow water and where no water was utilized removal was by hand. Water was then channelled down the passageways through the pit where it would mix with the dung (Burrett and Logan 2016). Elsewhere, in southern Africa, terracing is also a common phenomenon. A good example of this being the Bokoni site in Mpumalanga, South Africa. The agricultural terraces in this belt extend for some 150 km along the eastern edge of Mpumalanga Highveld (Widgren et al. 2016). Evidence has been found to show that these terraces were used for maize cultivation. Apart from extensive agricultural

Figure 4. Photograph showing terraces of the Nyanga complex.

terraces at Bokoni, long walled cattle roads also attest to a close integration between animal husbandry and crop cultivation (Widgren et al. 2016).

However**,** emerging research by Kritzinger (2008) has challenged the agricultural theory by arguing that extensive landscape modification in Nyanga was a result of surface eluvial gold mining. In this theory, the stone structures are regarded as gold mining infrastructure. According to Kritzinger (2008), early miners stripped off the eluvial (placer) deposits in a widespread activity of bench mining, making terraces compatible with the technique of ground sluicing rather than farming. In her hypothesis, loose quartz stones that are seen close to terraces are thought to be stockpiles of precolonial gold miners and this practice is similar to ore pilling by *makorokozas* which was observed during the ethnographic research. On the other hand, the pit structures are regarded as hydraulically engineered tanks designed for the recovery of gold through gravity concentration. The hydraulic tanks were designed in such a way that a heavy metal such as gold was recovered by gravity concentration because the curves in the tunnels are similar to the inside bend of alluvial rivers (Kritzinger 2008). Thus, heavy minerals fall out of suspension and collect as alluvium on the curves inside the tanks and the paved floors would provide clean water necessary in mineral processing (Kritzinger 2008). These tanks also have a close resemblance with cyanide tanks that were observed at a contemporary gold milling site in Penhalonga. The tank shown in Figure 4 is used by *makorokozas* to wash and recover gold. It is paved inside with concrete and has a water passage similar to the one which we found within pre-colonial tanks at Nyahokwe.

Indigenous knowledge systems in identifying gold deposits

Conversation with *makorokozas* revealed that they have varied interpretations on the probable use of the Nyanga ancient complex. A different kind of chain of operation was explained by Pinjisi who was working at Nyadenji, near Nyahokwe site in an area filled with ancient stone structures, dolly holes, hammerstones and stone paved pits. Pinjisi and his syndicate are mining on a reef belt

located beneath these features. During the conversations, he gave a detailed account of his intuition coupled with local knowledge systems that helped him to 'discover' the reef gold belt that they were working on:

> I came here from my home area of Nyatsanza in 2005 where I used to do alluvial gold mining. When I first arrived in Nyadenji to visit my brothers I found out that people in this area were panning gold in Nyangombe river. So, I set out to walk around the area to check where the gold was coming from which would eventually find its way into the river. I moved upslope, collecting samples of gold bearing rocks until I reached here at Nyadenji mountain where I found some old terraces and a lot of piled up quartz rubble. I immediately said to myself that this must have been an old ancient gold mine once worked by our ancestors. I took some samples around the stone piles on the surface and crushed them to test for gold. That is when I realised that this area has a lot of gold which is being washed downslope by erosion until it finds its way in Nyangombe river where people are panning. Thereafter, I decided to sink some trenches so that I could get to the real reef belt and ever since that time I have not returned to the river for panning because *mudhara mari iri mureef, zvekurwizi ndezve madzimai* … . (there is more money in reef mining and to me alluvial mining is an easy job for the light-hearted mostly women – he said this to me laughing). I got between 20–50 grams per 5 tonnes from my initial sampling of a stockpile of quartz around the terraces. (Pinjisi, Nyadenji, Nyanga 2016)

Thus, the denudation of the original deposit which originated from terraced mountains led to the redeposition of gold as alluvial deposits within Nyangombe River.

Pinjisi further explained that he thinks the terraces were possibly used in the past for gold mining purposes he said:

> These terraces were used to trap gold during surface mining by our ancestors. I have tested residual quartz along the terraces and I got good amounts of gold. During the rainy season, I have panned along gullies (pointing) which are close to the terraces and got good values of gold as well. These gulley's connect with some streams down there which flow into Nyangombe River. *Sekuona kwangu materraces aya aishandiswa kubata mapieces makuru eore inenge ine godridhe mugomo muno. Saka vakatsvaga a method yekuti ore yawo isazokukurwe nemvura kana kwakunaya* (As I see it these terraces were constructed during surface mining by our ancestors because they didn't want to lose pieces of ore due to erosion in the rainy season. So, the terraces would catch the ore thereby preventing it from being eroded). There are also some grinding stones and furnaces which we usually see all around this mountain and it is clear they were used a long time ago. *Togara tichiona maquartz akaunganidzwa mugomo muno zvekuti ukatora sample ipapo unotobata gold. Maquartz aya akasosiyiwa kare-kare nemadzitateguru edu* (we always see quartz piles in this mountain and we have sampled some and found traces of gold. These piles were left by our ancestors who used to mine gold in this area a long time ago). *Uyewo, mune huyo dzine makomba pakati dzakazara mugomo muno dzinova dzinogona kunge dzaishandiswa kukuya quartz yaive negold and ndiwo matomombo atiri kuona akaunganidzwa pese-pese* (Dimpled grinding stones are a common feature in this mountain which might have been used as tools to ground the quartz bearing gold ore – there are loads of quartz piles to support this idea). (Pinjisi, Nyadenji, Nyanga, 2016)

Thus, Pinjisi believes that terraces were used to trap gold in runoff on the mountains much in the same way how riffled blankets are used to catch gold on the james table/*chijumu* in contemporary gold mining. The points raised here by Pinjisi and the other interlocutors resembles Summers (1969, 13) argument that when gold bearing quartz is broken up and subjected to a flow of water at normal temperature, the gold being the heavy metal will separate from the grains thus forming alluvial deposits. Such deposits are being exploited mostly by women who are panning gold today within the Nyangombe River. Kritzinger (2008) also supports this idea and argues that the gold originates from an uphill source of primary bedrock which progressively weathers as secondary enrichment thereby forming eluvial (placer) deposits on hillslopes. As a result, of this continued weathering, the gold will migrate further to the gravel banks of rivers to form alluvial deposits. This then accounts for all the alluvial gold that is being panned by *makorokozas* within the Nyangombe River. As demonstrated, *makorokozas* have their own interpretations to the archaeological remains of Nyanga which are different from authorised discourses that are based on scientific knowledge systems. Therefore, listening and embracing the so called 'unofficial' narratives is one way of decolonising archaeological interpretations. Thus, within the same vein, Schmidt (2017b, 397), argues for archaeologies of listening 'that privilege local voices, not to the exclusion of professional

views, but accepting the idea that we have much to learn from those who are closest to the culture we are studying.' One also has to bear in mind that these local voices can be influenced by easily accessible non-archaeological written sources and thus orality in the modern world has to be carefully considered. However, I also want to underscore that what Pinjisi is sharing is informed by his expertise and experience of mining and not necessarily by oral traditions.

Conclusion

In this paper, I have illustrated that archaeological ethnography can be utilised towards decolonising the archaeological record in Eastern Zimbabwe. A decolonial archaeological practice was discussed in light of burgeoning practices of Indigenous artisanal mining and how it informed the interpretation of precolonial gold mining at Saungweme and Nyahokwe sites. Thus, ethnographic field work in the form of interviews and participant observation was undertaken with *makorokozas* working around these sites in which their multi-vocal perspectives were used to understand and interpret the archaeological record. Subsequently, an alternative history of the present that showed that Indigenous artisanal gold mining represented a long heritage of mining and metallurgy was illustrated. In Penhalonga, *makorokozas* gave detailed accounts of how 'German' miners once exploited ancient mining sites which had been set up by their ancestors. Their ability to connect their practices back through time informed by the knowledge that their ancestors once mined gold in the same areas was considered in this paper as a form of decolonised knowledge. Another contribution brought out by this integrated methodological approach was the rethinking of a hegemonic archaeological perspective that appends an agricultural use to ancient terraces and pits at Nyahokwe site. Contrary to this view, during various dialogical conversations with *makorokozas* working around this site, they all presented narratives challenging the agricultural hypothesis in favour of a gold mining and processing function of these features. Therefore, archaeological ethnography was deployed as decolonised methodology that embraced multiple interpretations of material culture in pursuit of understanding ancient and contemporary gold mining practices in Eastern Zimbabwe. Archaeological ethnography as a mutually collaborative, reflexive methodology involved the sharing of knowledge with *makorokozas* in this study. Engagement, dialogue, collaboration, observation and documentation of techniques in contemporary artisanal gold mining laid out a decolonised interpretative model for the archaeological sites.

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