

by Otis Crandell, 2021-04-05 17:38

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## **Revisions significant recommended needed**

This paper requires some significant revisions. I have summarised the recommendations of the peer reviewers in the attached file. The paper should be reviewed again following revisions.

Dear Sir,

Thank you very much for the positive evaluation of our manuscript. We put our sincere efforts to improve the paper and incorporated the corrections as proposed by the reviewers. I hope the revised version of the manuscript will convince you and the reviewers.

With Regards,

Dr. Gibji Nimasow (Corresponding Author)

### **Recommender's annotation (Summary of recommendations of the peer reviewers)**

#### **Minor revisions**

#### **General suggestions:**

- A revision by an English native speaker is needed.

Thanks for the suggestion. The manuscript has been revised by an Associate Professor of Department of English, Rajiv Gandhi University, India.

-- There are some recurrent mistakes: "grounded" instead of "ground" (p.p. of "to grind"). "Ground flour" does not make much sense: flour comes out of grinding, it is not ground itself.

"Bedstone" does not sound very well.

Suggestion: use "lower stone" to name the stone on which the "upper stone" is used for grinding (rolled or pushed).

Done. We replaced "grounded" with "ground". Similarly, "ground flour" has been replaced by "flour comes out of grinding" and "bedstone" with "lower stone" throughout the manuscript.

-- The English terminology referring to grinding devices is not consistent. Once a term is chosen, then this has to be used throughout the paper. There are terms that appear at mid-paper that have not been introduced before (e.g. what is the relation between chakki mills and ran-thok? different languages for the same device? is the ran-thok a form of chakki mills or a part of them?). The same applies for modern devices: these are referred to in many ways, which brings confusion while reading, e. g. is "roller-milled" referring to mechanical devices? It is not clear as the term "roller-milled" appears towards the end for the first time. Perhaps the authors can introduce the terms in the beginning of the paper, they may choose to use "traditional mills" vs "mechanical mills". Then they may divide traditional mills in categories (Neolithic "back-and-forth querns", then "rotary mills"). The reader is left with some terminological doubts: for example, are Chakki Mills always rotary mills?. Terminology is fundamental and should really be clarified in the beginning of the article.

Thank you for the suggestions. We have done our best to improve the English terminology referring to grinding devices by following your relevant comments. The term “grinding stone” has been defined and divided into traditional and mechanical mills. Further, the terminologies like *Chakki* Mills and *Ran-thok* and *Ling-chhom* has been defined in the beginning of the article.

-- The terminology is not consistent throughout the paper. Only in the end, a glossary is offered. Terms in local language should be distinguished from those in Hindi, and both should go in italics. The reader has to know before reaching the glossary what language is being used.

Done. The terms in local language and Hindi have been distinguished and made italics throughout the paper.

- The information provided in the introduction, results and discussion should be better organised and laid out in a linear way.

Thank you. We have done our best to organize the introduction, results and discussion in a linear way.

- The mentions to the ancient (pre-modern) grinding devices are not precise. The paper mainly focuses on a type of rotary device which does not appear in the Middle East and Central Asia before 1-2 century AD. Perhaps the same applies to India? This should be briefly discussed by the authors. The reference made in the paper to the Neolithic grinding devices is not clear: grinding rotary devices did not exist at that time. If the authors mention the Neolithic in order to speak about generic, pre-modern milling devices (but not specifically rotary devices), then this should be made clear.

Done. The reference made to the Neolithic grinding devices has been corrected and the introduction of rotary querns in the Middle East and Central Asia, including India has been incorporated with proper references.

- It seems that the two main points that the authors want to highlight are: the link between traditional grinding and socialising, and the quality of the flour, which is higher when traditional grinding tools are used.

Are these two aspects that have the Shertukpens maintain this traditional technology? Not clear if the authors think this.

In any case, these are two very interesting aspects that should really be highlighted with more emphasis as results of the paper.

Thank you. You have rightly pointed out the main point of the paper. Yes, the Shertukpens are maintaining this traditional technology and these two aspects have been highlighted with more emphasis in the results and discussion of the paper.

- Concerning the quality of the flour produced with traditional grinding devices, the authors say that this flour is preferred by people as it has a better taste; however, they add, flour from mechanical devices is much more consumed. This sounds like a contradiction. Perhaps the authors want to say that, despite the taste, people tend to consume more flour from mechanical devices as this is cheaper and more accessible? If this is the case, it should be explained better.

Done. The contradiction on the quality and consumption of the flour has been explained in better way.

**Some specific recommended changes:**

- 3rd line of introduction section: “...to human survival during the past years” suggest remove the word “years”

Done. Thank you.

- 6th line of introduction section: change order to “Upper Palaeolithic and Neolithic” (for chronological consistency).

Done. Thank you.

- 8th line of introduction section: remove “these implements are often called grinding stones”.

Done. Thank you.

- 4th paragraph of introduction section: remove “, etc.”

Done. Thank you.

- 7th line in results section: typo in “gething” - should be getheng

Done. Thank you.

- 12th line in results: “both the stones” - remove “the”

Done. Thank you.

- 13th line in results: remove “by the stones”.

Done. Thank you.

- 2nd paragraph in results: last sentence starting in “Further reports ...)” seems to be missing a verb.

Done. Thank you.

- 3rd paragraph in results: “So, they (...)” change to “interviewed villagers” or similar expression to detail who “they” is referring to.

Done. Thank you.

- p.5 line 3: “The the wooden tool is 20cm” => one “the” should be removed.

Done. Thank you.

- p.6 line 3 and 4 from bottom: “which noticeably improve the flavour” & “gives it a subtle smokey flavor” => please normalize choosing between “flavor” (US) or “flavour” (UK)

Done. Thank you.

## **Points for specific sections:**

### **Abstract:**

- The abstract doesn't include the method of investigation and the results of it.

True. The method of investigation and the results have been incorporated.

### **Keywords**

- The keywords are not accurate. Suggestion: India, Arunachal Pradesh, Shertukpen tribe, Indigenous culture, Grinding stone;

Thank you. The keywords have been rearranged as per the suggestions.

### **Introduction:**

- In the Introduction: "However, declining availability of raw materials such as wood and bamboo has encouraged Shertukpen artisans to adapt to their environment and become skilled experts in making stone tools." Could you please make clear if this is your observation or suggestion or if the Shertukpens explained that to you? Indeed, the direct link between the increase of stone tool production and decrease of woody raw materials is an interesting observation if this link is supported by concrete data. This may bring interesting element of discussion for the interpretation of some archaeological material in certain cases (for example concerning the bamboo hypothesis in South-East Asia, even if the contexts are different).

Now corrected. The context was expressed wrongly. We mean to say that "the availability of raw materials such as stone and wood in the surroundings has encouraged the Shertukpen artisans to become skilled experts in making stone tools".

### **Results:**

- The caption of the figures is too short, please explain a bit.

Done. Thank you.

- The text inside the map is not readable.

Done. Thank you.

- It needs a table including the places and the types of grinding tools with some more details such as size, types, materials, etc.

Thank you. A table describing the places, types of grinding tools, average size and materials used has been incorporated.

## **Discussion:**

- Nixon-Darcus, 2014 thesis should be cited in the discussion paragraph about Ethiopia and removed from the conclusion.

Done. Thanks.

## **Major revisions**

### **General suggestions:**

- It is difficult to classify the article into a specific research area. Is this article a documentation of "cultural heritage", a kind of ethnological study/cultural anthropological study, or a sociological study. Although the objects are studied, it is very interesting that the users are also included. However, it is not clear from the text what the goal of the study is. Especially in the abstract and in the introduction, a clear statement of the goal of the work is missing.

Now corrected. This article is a documentation of cultural heritage that has been made clear in the abstract and introduction. The statement of the goal of the work has been incorporated in the abstract and introduction.

- The literature cited often refers to archaeological work. However, the subject is about modern objects and modern people. The interviews with the people who create and use these stones are a plus. But the data basis and the systematic evaluation of these is missing. The questionnaire with the questions that were asked to the people could be attached and then the evaluation, according to which criteria the statements that occur in the text were worked out. This would make the relation between the people and these objects better understandable.

Thanks for the suggestion. The work is based on personal interviews, focus group discussions, field and participant observations. We didn't use questionnaires for the survey. However, a simple *chaine operatoire* was used to understand the manufacturing process of grinding stones which was missing in the earlier version has been incorporated.

- In the description of the stone objects there is a lack of a methodical approach and a data basis on which a systematic evaluation could be made. For example, a simple *chaine operatoire* description could be used here for the manufacture. Little information is given about the manufacturers.

Thanks. As stated above a simple *chaine operatoire* has been added and a separate section about the manufacturing process and the manufacturers has been incorporated with photographs.

- Separate the usage. Are the manufacturers and users the same? Is there a specific professional group that makes these stones? Or do people make these objects according to their own needs? Are they also sold or traded?

Done. The description of manufacturers has been added.

- In terms of use, the description of the exact sequence of gestures that the users perform in order to use a particular object could be a good contribution.

Thanks. Now corrected.

- Describe the manufactured product more precisely. All these steps would have to be gone through for each category of stones (once for Ran-thok and once for Ling-chhom).

Done. We tried our best.

- Indispensable is to explain why these objects are so unique and why they are worth preserving. While this is implicit in the text, it should be made explicit. This can be done very well with comparisons from the region that could emphasize the special nature of the objects in the study.

Thank you very much for nice suggestion. We have tried best efforts to make the explanations explicit.

### Points for specific sections:

#### Introduction and background:

- It seems that the authors are introducing the reader to grinding stones and nutting stones technology from Shertukpen tribes. It is easy for the reader to get lost in the section. Particularly in the first paragraph: there is a lack of connection between ideas and some sentences seem isolated in a paragraph that becomes circular and repetitive.

Thanks for the suggestion. The sentences have been reframed for better connectivity.

- It is not clear whether the grinding stones and nutting stones technology presented in the introduction refers to a global or particular form of technology or particularly to the one developed by the tribes under study. In this sense, are the raw materials referred to in the second paragraph (beginning in "Nutting stones have...") the ones used in the study region in India or Texas (from the cited author)?

Thanks. The technology present in the introduction refers to global form of technology. However, it was not clearly mentioned in the earlier version. Hence, the sentences have been rearranged for clarity especially the paragraph referring to nutting stones.

- In the 3rd paragraph authors indicate there are 26 major tribes and proceed to name 15 of them - what is the criteria of choice? Rephrase this.

Done. The sentence has been rephrased by including all the 26 major tribes.

- (last paragraph of intro) Authors indicate that the Shertukpens are "good at wood carving and stone sculpting". Then carry on with "However, declining availability of raw materials such as wood and bamboo has encouraged Shertukpen artisans to adapt to their environment and become skilled experts in making stone tools". - It is not clear whether stone technology is a tradition or a more recent adaptation. Overall, this paragraph is confusing.

Done. As stated earlier, the context was expressed wrongly. We mean to say that “the availability of raw materials such as stone and wood in the surroundings has encouraged the Sherkpen artisans to become skilled experts in making stone tools”.

There is a lack of information about the area of study which should be moved to after the intro and before the methods.

Thanks. The information about the area of study has been moved to the appropriate place as suggested.

- The motivation and question are not clearly presented. The history of grinding stones and their types of tools is poor.

Thanks. Now corrected.

### **Methods:**

- Authors indicate 120 households from 12 villages? Which?

Thanks. The name of 12 villages has been mentioned.

- What questions were included in the interviews? What are the details of the interview population (gender, age, occupation)?

Thanks. All the necessary information pertaining to the details of the interview population has been incorporated.

### **Results:**

- It would be interesting to see more details on the interviews described in the method section. Are there differences between villages in terms of raw material used; stone tool mean size; proportion of grinding tools and nutting tools.

Done. More results from the interviews have been added. A table with details of the villages, stone tool types, average size and materials used has been included.

- The type of stones is important on the quality of ground flour and the reason that people choose them is fundamental when you want to do an investigation on the grinding stone. Also, it would be interesting if the origin places of these grinding stones were specified on the map. In addition, the types of wooden planks and the variety of them are important.

Thanks. The types of stone and wooden planks have been incorporated. However, the origin places of grinding stones could not be specified on the map as the manufacturers fail to express the exact places.

### **Discussion:**

- Some of the problems with the introduction are present in the discussion - discourse needs to be reorganised to have a clear thread and to answer questions that are only implicit throughout the text.

Done. The discussion has been reorganized in more meaningful way.

- Suggest moving the first paragraph of the discussion to the introduction of the article.

Done. Thank you.

- Not clear what “take care” means in this sentence. Rewrite the second paragraph. It is confusing.

Done. Now corrected.

- Discussion focuses on women interaction during grinding activities. Some questions arise that could be answered in the results section such as: is this an activity performed only by women? What is the labour division - e.g. one group produces the tools, another group uses them?

Done. The related information has been added in the results section.

- Are there differences or similarities between the households interviewed? If this is a first approach to the region technology from an ethnographic and anthropological point of view then it should be referred to in the introduction.

Thanks. Now corrected. Yes, it is a first approach to the region technology from an ethnographic and anthropological point of view. The same has been referred to in the introduction part.

- The discussion needs to be revised. It focuses mainly on social interactions but it needs to discuss the manufacturing of grinding stones and traditional methods as well as the reasons for the utilization of grinding stones until now in some regions. Also, the types of stone should be considered and the accessibility of the stone from the mountain must be investigated because is effective in the usage of them.

Thank you. The discussion has been revised. The manufacturing process, usage and types of stones has been incorporated in the revised version.

## Conclusions:

- In this section, avoid having references or new information not mentioned prior in the article.

Thanks. We tried our best.

- The conclusion focuses too much on modern mechanical technology. What are the conclusions drawn from the analysis on stone technology?

Done. Now added.

- The first sentence seems to be a cited conclusion from other authors and for this reason, it be moved to the discussion sections.

Thank you. Moved to the discussion section.

- The authors conclude the technology is “environmentally friendly”. Explore this idea more in the discussion and elaborate more on this sentence.

Done. Explored the idea more in the discussion and elaborated more on this sentence.

- Revise and explain the achievements of your investigations.

Thanks. The achievements of investigation has been revised and explained accordingly.

Apart from the review comments, we have improved the photographs and added more relevant photographs for better visual appreciation.

We would like to express thanks and gratefulness to the respected reviewers, the recommender and PCI-Archaeology for such a relevant review of our manuscript.

With Regards,



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