**Social
Geography
Discussions**

Interactive comment on "The Entlebuchers: people from the back of beyond?" by U. Müller and N. Backhaus

Anonymous Referee #2

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General Comments

The paper by Müller and Backhaus seeks to attend to some of the implicit difficulties in researching visual representations. It is an empirically grounded paper that introduces an innovative methodology as applied to the differing visual representations of the UN-SECO biosphere reserve in the Entlebuch region in Switzerland. The paper outlines the author's attempts to construct a 'quantitative' methodology that will systematically analyse visual representations whilst still accounting for the contingent processes of meaning construction. While questions still remain as to the efficacy of this methodological form, at the very least for this the authors are to be commended.

Starting from a constructivist perspective, the paper highlights the implicit difficulty in

the analysis of visual representations whose meaning is by definition contingent and multiple. The polysemous nature of visual representations makes analysis more difficult when the number of images to be analysed is large and when comparative analysis is desired. The author's abductive methodology, based on the processes of 'spatial appropriation' through visual representation, seeks to produce a relatively codified and efficacious quantitative method of analysis that will at once categorise visual representations according to their component features, and quantify the relative importance of these categories within and across particular source publications which form the context of the analysis. Whilst the author's present this process as having a high degree of reproducibility, their validation lacks a consideration of the root indeterminacy of the visual image. That is, in presenting their quantitative methodology they have, I feel, overemphasised the closure of meaning as interpreted in the course of analysis. Whilst it is possible to produce a refined categorisation of visual imagery, as they ably do in their abductive process, the authors at the last fail to adequately emphasise the contingent nature of this process. Ultimately this is not a negative appraisal of the methodology, but rather suggests that the author's need to embed a more contingent understanding of their 'quantitative' approach that takes into account the polysemic nature of visual representations they so adequately introduce in the initial sections of the paper.

One minor area of concern in the empirical discussion (see specific comments below) is the mobilisation of the notion of sustainable development. Whilst not critical to the analysis, the authors may wish to consider clarifying what types of sustainable development are being mobilised by the different actors involved in the biosphere process, particularly, say, the definition used by UNESCO. This will help clarify tensions over different interpretations of representations of 'environment' and 'development' in the analysis.

Overall, this paper, and the research on which it is based, is a worthy attempt to deal with a difficult subject that requires attention. Despite the alarm bells that a quantita-

tive analysis of visual representations may ring for those who conform to a constructivist perspective, this paper is successful in taking the bold leap into the quantitative/qualitative divide in the analyses of visual representations. It is well written and structured in a clear and logical manner. The accompanying figures are sometimes complex yet coherent in their presentation, and convey a great deal of information. I suggest this paper be accepted subject to minor revisions, including the consideration of the specific comments, and the correction of technical changes, both of which are outlined below.

Specific Comments

These specific comments regarding the particularities of the text are separated into what I feel are more necessary emendations followed by minor suggested emendations and comments. I would consider none of these emendations as critical to the main themes of the article, although I would urge the authors to consider them in the revision process.

Necessary Emendations

(p89, lines 26-7) In this paper you only refer to the Entlebuch research in the empirical analysis. You need to clearly state that whilst the research covered the two areas mentioned here, this paper will only directly deal with the Entlebuch results.

(p96, line 27 - p97, line4) The denotation of a viewers "distance" as being either "close" or "far-off" is I feel problematic, particularly given the nature of the accompanying figure (Fig. 1). Do we only view the image across a linear continuum from near to far? What of other views, from above or below (e.g., the child's view?), changing horizontal perspectives (as indicated in the figure), the changing context of the environment (e.g., light-dark, night-day), amongst myriad others. As the figure alludes, as well as the discussion immediately following this sentence, the "standpoint" of the viewer (in conjunction with the context of the viewing), rather than the distance, needs to be the primary consideration.

Suggested Minor Emendations and Comments

(Meaningful Spaces, p91-2) You may wish to consider including reference to the work of Stuart Hall, whose constructivist position has been influential in the English language literature on representation and meaning.

(p91, line 2) Whilst critical commentary on sustainable development is referred to another publication, the prominence of sustainable development in this paper requires at least a cursory definition to help fix the meaning of this contested term for this paper.

(p94, line 15) re: "Mental appropriations therefore tend to have consequences for others". Is this in fact the case, particularly since you have just argued that mental appropriations need not be based on "real" spaces. Perhaps you need to mediate this statement to reflect the difference between "real" and fictitious places.

(p95, line 23) re: "excludes all that is different". It may be important to note that this exclusion is temporally fixed, and that something that is excluded at one point in time becomes included at another. Hence, to say that "all" is excluded needs to be moderated somewhat, particularly in light of the conclusions drawn later in the analysis. Further, the processes that seek the construction of 'preferred meanings' about places (in this case regions) are never clearly bounded due to the contingent nature of place making, so it remains difficult to see, even at a single given point in time, of what the "all" that is to be excluded ultimately consists.

(p97, line 20) The term "inherent meaning" needs further elucidation. Is this related to the 'preferred meaning' often discussed in the construction and analysis of media representations? What types of meaning are "inherent" in the image? Does this include only the intentions of the producers of images, and who are these producers (photographers, journalists/writers, editors, producers, copywriters, amongst others)? Whilst you have gone some way to discuss this, I am still left feeling unsure of the suitability of the term and its extent of application.

(p98, line 1) Is this methodology best described as "quantitative" or should you note that it is a hybrid methodology involving both quantitative and qualitative aspects? By defining the methodology as purely quantitative you overemphasise the ability of the categorisation and coding processes to 'fix' the meanings of the images in the analysis.

(p98, lines 20-3) Again, this preliminary discussion of the categories of "participation" and "cooperation" would benefit from an introductory definition of sustainable development as it relates to this discussion.

(p98, lines 23-5) It may be useful here to restate that the biosphere site is the Entlebuch region and the world heritage site is the Jungfrau-Aletsch-Bietschhorn region as the substantive introduction of the case study analysis is yet to come.

(p99, line 5) You have noted that during the "final cycle of categorisation, the categories may not be modified any further". What defines this "final cycle"? Is the designation of the "final cycle" arbitrary, or contingent on a degree of inclusion of the sample images, and therefore an iterative process? Again here there is a tendency to overemphasise the degree of confidence in the "quantitative" aspects of the processes of categorisation and subsequent analysis.

(p99, lines 12-3) The designation here of difference between 'developed' and 'developing' is potentially problematic. This assumption, that the "space of problems" would include widely divergent 'problems' in the case of 'developed' and 'developing' nations needs to be empirically validated and hence, as you suggest, represents an opportunity for further research.

(p99, lines18-20) This designation of "primary" and "secondary" occurrence opens up a couple of questions. Firstly, it appears that an image can have multiple primary and/or secondary occurrences. Is this the case? Further, how do these different levels of categorisation then relate to the values represented in the graphs in the later analysis? Are there different relative values accorded to the different levels of occurrence which then impact these final values represented in the graphs. Perhaps a little more explanation

needed here.

(p99, lines 28-9 to p100, line 1) re: "a high degree of reliability". I still feel that you need to stress the ultimate subjective nature of image interpretation here. No amount of training and induction will fix the interpretation of images, and if it does then that opens up other questions as to the influence of these training and induction mechanisms in the filtering of interpretations.

(p101, lines19-21) Are there other ways to view the images beyond the dichotomy between the "romantic external view" and the "everyday internal view"? Does the reliance on this dichotomy predetermine the limits of the analysis, and preclude other visions?

(p103, line 24) re: "has to have a say". Considering the earlier statement (p103, lines 1-3), perhaps this statement needs to be changed to "should have a say"?

(Results of image analysis, p103-4) Initially you have positioned this methodology as suitable for the interpretation of a large number of images and/or publications. However, the publications presented in the empirical section must surely only be a subset of the wider sample. As such you need to clarify the breadth of your analysis and how the examples in this paper relate to the wider analysis. Following from this, is it possible to then include a comparison of the results presented in the paper with results for the wider analysis, perhaps in the form of tabulated data or a further graphical representation? This would help to better position the results of the case study within the wider research results.

(p105, lines 19-22) Perhaps need a deeper discussion of the contested nature of the term sustainable development here (e.g., see McManus, 2000). How does UNESCO define sustainable development in terms of the designation of a biosphere reserve? I feel you need to do this in order to clarify statements regarding the intent of representations of sustainable development.

(p106, lines23-9) The strategic inclusion/exclusion of representations of natural disas-

ters says more about the actions of the different media. For example, the question of whether the region is a problem area with regards to thunderstorms needs to be read against the desires of the media to construct a preferred reading of the region as prone to natural disasters. Whether this then validates its inclusion in other forms of media can then be appraised. Hence, this may not be a "blind spot", but rather a differing interpretation of the importance of this representation to the particular media form/publication. This feeds into a wider discussion of the nature of a comparative analysis between a regional newspaper and biosphere promotional material. One would not expect these different publications to represent the region in the same way.

(p107, line 15) re: "a general map of Switzerland". Does this refer to a particular map, in which case there needs to be a reference, or to all maps of Switzerland?

(p107, line 20-1) re: "the Entlebuch is frequently mentioned in all national and many international media". Is this conjecture supported by empirical evidence, or merely anecdotal?

(p108, lines 23-5) Perhaps instead of stating that there would have been "no chance" it would be more appropriate to claim that there would have been "little chance".

(p110, line 8) "Sustainable development" is attributed to "regional produce, cooperation, educational programmes, etc.". A definition of sustainable development earlier in the paper would better clarify whether these outcomes are appropriate and/or adequate.

(p110, paragraph 1) Another issue related to the discussion at the end of page 108 is the recognition that there is no longer any need to 'sell' the idea to agricultural workers who have been impacted by previous conservation projects, namely Rothenthurm.

(p110, line 24) You state that "image analysis is therefore a useful method to complement interviews". Did you conduct interviews in this research project, and if so was the image analysis complementary?

(p110, line 25) This conclusion, that it is important to consider the context of images in their interpretation, needs to be reflected in your earlier discussion of the different media (i.e., newspaper versus promotional brochure) under investigation.

(p111, lines 16-8) Perhaps it would be helpful to reflect on this conclusion in the methodology section.

(p111, lines 21-2) re: "During our research with image producers, we saw that their choice of images was rarely conscious". You have not mentioned this aspect of the research previously. Perhaps you could refer to this selection process somewhere in the analysis rather than introducing it in the conclusion.

Technical Comments

(p89, line 14) Replace "und" with "and".

(p92, lines 25-6) Quotation marks need reformatting to remove redundant spaces.

(p93, line 13) Consider rephrasing "but also".

(p94, line 29) Reconsider the use of the word "latest". Consider rephrasing as "which may lead to conflicts when".

(p95, lines 2-6) Poorly structured sentence; consider removing "-"

(p95, line 13) Replace 'their impact" with "the impacts of regionalization"

(p95, line 13-4) I would suggest you use "e.g.," rather than "etc" in the case of these examples.

(p96, line 1) Consider replacing/removing "etc" as it a poor grammatical convention for this style of writing.

(p96, line 22) Consider replacing/removing "etc".

(p99, line 2) Space missing before "to allow".

(p99, line 13) Remove extra word, "in".

(p100, line 8) re: "mixing of images different publications". Missing word, "in".

(p100, lines 18-9) Perhaps reword the example. It is not very clear as it stands.

(p101, line 2) Remove extra word, "to in".

(p101, line 11) re: "same is". Missing word, "time".

(p105, line 5) re: "is romanticised". Should this be "is often"?

(p105, lines 6-8) Poorly structured sentence. I am not sure of the convention required by the journal editors, but you may consider using lowercase rather than capitals after colon use.

(p105, line 15) See previous statement concerning colon use.

(p106, line 2) Refer to Figure 6.

(p107, line 19) Replace "latest" with "least".

(p108, lines 25-27) Poorly structured sentence.

(p109, line 1) Missing colon.

Bibliography

McManus, P. (2000) "Sustainable Development", in R.J. Johnston, D. Gregory, G. Pratt, M. Watts (eds), The Dictionary of Human Geography (London: Blackwell).