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Discussions

Interactive comment on "Conceptualizing community resilience to natural hazards — the emBRACE framework" *by* Sylvia Kruse et al.

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This paper presents an interesting and promising framework that is very ambitious in developing an analytical tool and at the same time providing conceptual insight into community resilience. It is an important contribution to conceptual work on resilience and especially community resilience. It is well-written and .provides new ideas and methodological insights to the reader. The need to improve conceptual work on the concepts community + resilience, is identified in an appropriate manner. Key literature that addresses challenges linked to this term is discussed.

A strength of this paper is the connection of the analytical tool and conceptual work. The development of the framework as analytical tool lies at the centre of the work and

is successful. The identification of three domains is a helpful and powerful innovation. However, the challenges that this approach carry along, are not made sufficiently transparent. The vagueness of the concept is not fully overcome. While strands of theory that could help to shed light on the terms are mentioned, they should be made use of in more depth. More conceptual clarity is necessary in order to underline, why e.g. the domain of "actions" has to be approached by a specific type of methodology that encompasses relevant and complex social dynamics. The ambition to connect a top-down systems understanding of resilience and a bottom-up empirical perspective brings some challenges that should be discussed. Specifically the ways in which the three domains are approached methodologically do depend highly on the conceptualisation and operationalisation of the terms.

Social theory is the conceptual source from which new knowledge could be introduced in order to access community resilience. It requires a new approach, maybe refraining from using clear-cut indices, but it is necessary if the social interactions that occur and that could contribute to "resilience" are taken seriously. I propose that this paper puts the open questions that arise from the framework, at the centre and while it is not necessary to answer these questions, it should make the questions as clear as possible in order to give the chance to other authors to respond and to hint towards good conceptual approaches that could help improving the concepts and tools of the embrace framework.

In the following, specific comments to parts of the paper are presented.

Concerning the clarification of the term "community resilience" it would be good to also discuss literature that presents a critical perspective towards the use of the term "community".

Resilience is mentioned as influenced by social interactions, but there is a lack of discussion of social theory that explicitly addresses social interactions and of the contributions it could make to a concept like resilience. As an example, structuralist vs. non-

structuralist lines of theory could be discussed. This could contribute to an improvement of the conceptual approach, especially for the domains of "action" and "learning". A promising approach on understanding resilience in the light of social interactions could be adopted by making use of current developments in social practice theory (authors like Schatzki, Shove but also classics like Bourdieu and Giddens).

In presenting the framework (chapter 4) it would be good to discuss more clearly the types of generalisations that had to be made in order to develop the framework.

The identification of the different capacities and resources does not fully overcome thinking in boxes, e.g. financial, human, natural sector. One could ask whether these are the relevant structuring elements in order to understand COMMUNITY resilience. It is designed in order to build indicators that could be related with figures/numbers, but I doubt that it allows evaluating complex social interactions.

By saying e.g. that civil protection is focusing on hazard specific action, the approach does not look sufficiently into to the multiple social interactions that take place and are of relevance for civil protection actors. It is moreover not clear who performs which types of actions. When talking about Civil protection it is not clear if staff members and their actions only are meant or if it refers to all activities that take place under a civil protection logic independently of who performs these actions.

Learning (and awareness) is mainly explained through a concept of knowledge and thereby it does not address sufficiently the activity and practices that are parts of learning processes. In its current form the domain of learning cannot answer the question why people have more knowledge but do not learn or do not implement the things learned.

The paper makes a relevant point by highlighting that community resilience has to be analysed as part of a broader context. But there is a lack of conceptual depth in dealing with this in this paper. It is not regarded as sufficient to look at what other authors of disaster risk science and policy change have written. This could be improved by

discussing the work on social change from those scholars that analyse the nature of the social itself (social science and humanities).

Concerning the questions to be addressed according to the journal:

1. Does the paper address relevant scientific and/or technical questions within the scope of NHESS? YES 2. Does the paper present new data and/or novel concepts, ideas, tools, methods or results? YES 3. Are these up to international standards? YES 4. Are the scientific methods and assumptions valid and outlined clearly? YES 5. Are the results sufficient to support the interpretations and the conclusions? PARTLY 6. Does the author reach substantial conclusions? YES 7. Is the description of the data used, the methods used, the experiments and calculations made, and the results obtained sufficiently complete and accurate to allow their reproduction by fellow scientists (traceability of results)? PARTLY, see comments above. 8. Does the title clearly and unambiguously reflect the contents of the paper? YES 9. Does the abstract provide a concise, complete and unambiguous summary of the work done and the results obtained? YES 10. Are the title and the abstract pertinent, and easy to understand to a wide and diversified audience? YES 11. Are mathematical formulae, symbols, abbreviations and units correctly defined and used? If the formulae, symbols or abbreviations are numerous, are there tables or appendixes listing them? N.A 12. Is the size, quality and readability of each figure adequate to the type and quantity of data presented? Yes 13. Does the author give proper credit to previous and/or related work, and does he/she indicate clearly his/her own contribution? YES 14. Are the number and quality of the references appropriate? Mainly,but substantial work from social theory should be added. 15. Are the references accessible by fellow scientists? YES 16. Is the overall presentation well structured, clear and easy to understand by a wide and general audience? YES 17. Is the length of the paper adequate, too long or too short? ADEQUATE. 18. Is there any part of the paper (title, abstract, main text, formulae, symbols, figures and their captions, tables, list of references, appendixes) that needs to be clarified, reduced, added, combined, or eliminated? NO 19. Is the

technical language precise and understandable by fellow scientists? YES 20. Is the English language of good quality, fluent, simple and easy to read and understand by a wide and diversified audience? YES. 21. Is the amount and quality of supplementary material (if any) appropriate? N.A.

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